This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

41

Harvard University
Library of
The Medical School
and
The School of Public Health

VE RI TAS

The Gift of

TRANSFERRED TO CENTRAL LIBRARY

THE

NEW YORK

MEDICAL JOURNAL.

LIBRARY
HARVARD UNIVERSITY
DENTAL SCHOOL

EDITED BY

FRANK P. FOSTER, M.D.,

PHYSICIAN FOR DISEASES OF WOMEN TO THE OUT-PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL.

VOLUME XXXII.

NEW YORK:
D. APPLETON & COMPANY,
1, 3, AND 5 BOND STREET.
1880.

HARVARD UNIVERSITY
SCHOOL OF MEDICINE AND PUBLIC HEALTH
LIBRARY
10/18 1940

41

COPYRIGHT BY
D. APPLETON AND COMPANY,
1880.

O.K.
L.N.M.

CONTRIBUTORS TO VOLUME XXXII.

AYRES, W. C., M. D.
BOSWORTH, FRANK H., M. D.
BRADFORD, EDWARD H., M. D., Boston.
BRONSON, EDWARD B., M. D.
BULL, CHARLES S., M. D.
BULL, WILLIAM T., M. D.
BUSH, J. FOSTER, M. D., Boston.
CABOT, A. T., M. D., Boston.
CARPENTER, WESLEY M., M. D.
CHAMBERS, T. R., M. D.
DELAVAN, D. BRYSON, M. D.
EVETZKY, E., M. D.
FOLSOM, NORTON, M. D., Boston.
FOSTER, FRANK P., M. D.
FOX, GEORGE HENRY, M. D.
GERSTER, ARPAD G., M. D.
GIBNEY, V. P., M. D.
GRISWOLD, GASPAR, M. D.
HAMILTON, ALLAN McL., M. D.
HAMMOND, WILLIAM A., M. D.
HEINEMAN, HENRY N., M. D.
HOWE, JOSEPH W., M. D.
KATZENBACH, W. H., M. D.
KELSEY, CHARLES B., M. D.
KENWORTHY, C. J., M. D., Jacksonville, Fla.
LEE, WILLIAM, M. D., Baltimore.
LORING, EDWARD G., M. D.
LUSK, WILLIAM T., M. D.
MARKOE, FRANCIS H., M. D.
MASON, JOHN J., M. D.
MINOR, J. C., M. D.
MINOT, CHARLES SEDGWICK, M. D., Boston.
OPPENHEIMER, HENRY S., M. D.
PARTRIDGE, EDWARD L., M. D.
PEABODY, GEORGE L., M. D.
POORE, CHARLES T., M. D.
PORTER, P. BRYNBERG, M. D.
RANNEY, AMBROSE L., M. D.
ROBERTS, M. JOSIAH, M. D.
SMITH, ANDREW H., M. D.
TOWNSEND, F. M., M. D.
VAN BUREN, WILLIAM H., M. D.
WACKERHAGEN, G., M. D., Brooklyn.
WENDT, EDMUND C., M. D.

INDEX TO VOLUME XXXII.

PAGE
ABDOMINAL Wall, Abscess of, 623
Abortion, Treatment of, 404
Abscess, Cerebral, following Suppuration of the Middle Ear, 488
Abscess of Abdominal Wall, 623
Academy of Medicine, New York, Proceedings of, 174
Aconite Poisoning, 303
Albumen, Metaphosphoric Acid as a Test for, 320
Albuminuria, 320
Alcohol in Aural Polypi, 435
Alkaloids in the Blood, Power of Organs to Retain, 323
Allin, Dr. Charles M., Preamble and Resolutions upon the Death of, 222
Alumni Prizes, 335
Ammonium Carbonate in Pulmonary Diseases, 316
Amnion, Dropsy of, 403
Amputation, Lisfranc's, 61
Amputation of the Cervix Uteri with Paquelin's Cautery, 414
Amputation, Syme's, 61
Amyloid Degeneration, Rapid. 221
Anæmia as a Cause of Heart Disease, 315
Anæmia, Pernicious Progressive, 668
Anæsthetics in Parturition, 406
Anatomy of the Nasal Fossæ, 375
Anatomy, Semi-annual Report on, 435
Anchylosis, Temporo-maxillary, 299
Aneurism, Aortic, Electropuncture for, 544
Aneurism of the Innominate, Distal Ligature for, 548
Anteversion of the Uterus, 416
Antiseptic Method in Operations about the Eye, 96
Anus, Artificial, Indications for, 543
Anus, Ulceration of, Tubercular, 189
Aortic Incompetence, Compensation in, 647
Aphasia, 105
Aphasia and Facial Paralysis with Hemiplegia, 521
Apomorphia as an Expectorant, 657
Apoplexy of the Lung from Heart Disease, 317
Appendix Vermiformis, Gangrene of, 306
Army Intelligence, 111, 223, 336, 447, 558, 671
Arteries of the Upper Extremities, Embolism of, 300

PAGE
Artery, Femoral, Embolism of, 63
Artery, Middle Meningeal, Rupture of, from Injury, 190
Artery, Pulmonary, Stenosis of, Congenital, 182
Aspiration in Pleuritic Effusion, 146
Association, American Medical, 43
Association, American Public Health, 557
Association of Medical Editors, American, 44
Asylums, Lunatic, Management of, 109, 110
Ataxia without Motor Paralysis, 307
Atresia of Meatus Auditorius Externus, 308
Atropia and Duboisia, Comparative Value of, 94
Atropia in Whooping-Cough, 34
Atropine Poisoning, 326
Audiphone, 100
Audition, Binaural, 432
Audition, Power of, Testing, 432
Auditory Canal, External, Exostoses of, 100
Auditory Canal, Furuncles in, 102
Auditory Meatus, External, Atresia of, 308
Aural Douche, 435
Autopsies, whether a Surgeon or Obstetrician may make, 538
Ayres, W. C. Visual Purple, 619

Bacillus of Leprosy, 669
Basilysis, 77
Baths, Hot, in Fevers of Infancy, 199
Benzoate of Sodium in Purulent Conjunctivitis, 94
Benzoate of Sodium in the Acute Gastro-Enteritis of Infants, 657
Bistoury, Concealed, 189
Bladder, Aspiration of, Pericystitis after, 305
Bladder, Distention of, in Women, 82
Blindness, Temporary, from Quinine, 94
Blisters, Modus Operandi of, 651
Bloodletting in Pneumonia, 319
Blood Vessels, Histology of, 20
Bone-setting, 219
Bone, Temporal, Osteophytes in, 102
Boracic Acid, 537
Boracic Acid in Suppuration of the Conjunctiva and Lachrymal Sack, 426
Bosworth, Frank H. Bilateral Paralysis of the Abductor Muscles of the Larynx, 460
Bougies, Uterine, Instrument for introducing, 65
Bradford, Edward H. Two Cases of Paralytic Affections in Children; with Remarks, 38
Bromide of Ethyl as an Anæsthetic, 176
Bromide of Ethyl in Hysteria and Epilepsy, 658
Bubo, 661
Bull, Charles Stedman. A Contribution to the Pathology and Treatment of Vascular Tumors of the Eyelids and Vicinity, 240

Cabot, A. T. The Antiseptic Treatment of Empyema, 136
Calabar Bean in Chronic Tetanoid Convulsion of Children, 199
Calculus, Renal, 153
Calculus, Urethral, 301
Calculus, Vesical, 395

PAGE
Cancer of the Rectum, Excision of, 608
Cancer of the Uterus, Chian Turpentine in, 85, 653
Cannabis Indica in Hemicrania, 653
Carbolic Acid as an Antipyretic, 655
Carbolic-Acid Inhalations in Whooping-Cough, 34
Carbonate of Ammonium in Pulmonary Diseases, 316
Carbuncles, Treatment of, Antiseptic, 195
Carcinoma, Gastric, 59
Carcinoma of the Uterus, 401
Caries, Dental, causing Suppuration in the Eyelid, 429
Caries of Vertebræ, Morbid Anatomy of, 552
Caries of Vertebræ, Suspension in, 214
Caruncle, Urethral, 399
Cataract Extraction, 94, 428
Cataract, Hard, Large-Corneal-Flap Operation for, 94
Cataract, Operation for, by Discission from Behind, 428
Cataract, Operations for, 98
Cataract Operations, Operation for a New Pupil after, 496
Cataract, Treatment of, with Electricity, 6
Catheter, Vermicular, New, 332
Cautery, Paquelin's, for Amputation of the Cervix Uteri, 414
Cavities, Pulmonary, Paracentesis in, 318
Cerebral Localization, 442
Cerium Oxalate for Cough, 67
Cervix Uteri, Amputation of, with Paquelin's Cautery, 414
Cervix Uteri, Apparent Shortening of, in Pregnancy, 75
Cervix Uteri, Epithelioma of, 413
CHAMBERS, T. R. A Case of Abscess of the Abdominal Wall, in a Patient with Subclavian Aneurism, 623
Chancre, 661
Chancre, Oral, 298, 303, 304
Cheken, 325
Chian Turpentine in Cancer of the Uterus, 85, 653
Children, Diseases of, Quarterly Report on, 197
Children, Hygiene of, Summer, 202
Chloral, Conjunctivitis from, 302
Chloral Hydrate, 335
Chloroform Poisoning, 658
Chorda Tympani, Anatomy and Physiology of, 439
Chorda Tympani, Paralysis of, Traumatic, 101
Choroiditis after Relapsing Fever, 96
Chromic-Acid Poisoning, 66
Cinchonidine Sulphate, 324
Circumcision for Cerebral Symptoms, 396, 401
Claustrophobia, 105
Climatic Treatment of Consumption, 317, 337, 479, 505
Coagula, Menstrual, Intra-uterine, 83
Cold, Anæsthetic Effect of, upon the Cornea, 1
Colon, Tuberculosis of, Secondary, 306
Color-Blindness, Congenital, 97
Colotomy, 174, 543
Compensation in Aortic Incompetence, 647
Congestion, Spinal, 294
Conjunctiva, Syphilide of, 426
Conjunctivitis, Diphtheritic, Quinine in, 92
Conjunctivitis from Chloral, 302

PAGE
Conjunctivitis, Gonorrhœal, 96, 97
Conjunctivitis, Granular, 97
Conjunctivitis, Purulent, Benzoate of Sodium in, 94
Conjunctivitis, Purulent, Boracic Acid in, 426
Constitutional Disturbance, 583
Consumption, Climatic Treatment of, 317, 337, 479, 505
Consumption Germs as Meat and Drink, 274
Convulsion, Chronic Tetanoïd, of Children, Calabar Bean in, 199
Convulsions, Puerperal, 409, 627
Copper, Sulphate of, Ammoniacal, in Trigeminal Neuralgia, 656
Cord, Umbilical, Expression of, 78
Cornea, Anæsthetic Effect of Cold upon, 1
Cornea, Herpes of, Febrile, 95
Cornea, Transplantation of, 426
Cough, Cerium Oxalate for, 67
Craniotomy, 406
Crime, Heredity, and Epilepsy, 107
Crime, Insanity, and Mind, 107
Cupping, Modus Operandi of, 651
Curare in the Treatment of Hydrophobia, 652
Curette, Uterine, Cutting, 65
Curette, Uterine, Peritonitis after the Use of, 305
Cystitis in the Male, Cystotomy for, 332
Cystocele, 416
Cyst of Vulvo-vaginal Gland, 81
Cystotomy for Cystitis in the Male, 332

Dartres and Syphilis, 664
Death of Fœtus, Acoustic Sign of, 75
Death, Rate of Cooling of the Human Body after, 441
Decapitation, Instruments for, 76
Degeneration, Amyloid, Rapid, 221
DELAVAN, D. BRYSON. On Some Points in the Anatomy of the Nasal Fossæ, 375
Delirium Tremens, Traumatic, 189
Dentaphone, 100
Dermatology, Quarterly Reports on, 207, 544
Diabetes, Ergot in, 654
Diabetes, Pilocarpin in, 657
Diarrhœa of Infants, Summer, 200
Diarrhœas of Infants, Serous, Salicylate of Calcium in, 655
Digestion of Proteids, 445
Digestion of Starch, 444
Digestion of Sugar, 444
Digestive Ferments, 443
Digestive Proteolysis, 445
Dilatation of the Uterus, 415
Dilator, Uterine, Slippery-elm, 65
Diphtheria, Pharyngeal, Purulent Otitis Media from, 100
Disease, Ménière's, 483
Disease, Pott's, Plaster-of-Paris Jacket in, 214, 215
Disease, Pott's, Suspension in, 214
Dislocations at Elbow, Rare, 188
Dislocation of Spinal Column, 539
Dispensary, Boston, Clinical Report of, 298
Dogwood, Jamaica, 326

PAGE
Douche, Aural, 485
Dropsy of the Amnion, 403
Duboisia, 327
Duboisia and Atropia, Comparative Value of, 94
Duboisia in Exophthalmic Goître, 327
Duodenum, Ulcer of, Perforating, 308

Ear, Middle, Affections of, in the Early Stages of Syphilis, 433
Ear, Middle, Chronic Suppuration of, 100
Ear, Middle, Post-mortem Examination of, 433
Ear, Middle, Suppuration of, Cerebral Abscess following, 433
Ear, Middle, Suppuration of, Dry Treatment of, 438
Ear, Noises in, Subjective, 101
Ear Telephone, 485
Ectasia of the Veins upon the Temporal Bone, 432
Eczema at the Umbilicus, 204
Eczema of the Eyelids, 97
Effusion, Pleural, 319
Elbow, Dislocations at, Rare, 188
Electricity in the Treatment of Lead Colic, 652
Electricity, Static, in the Treatment of Hemianæsthesia, 652
Electricity, Treatment of Cataract with, 6
Electrotonus of Sensitive Nerves, 557
Embolism of Femoral Artery, 68
Embolism of the Arteries of the Upper Extremities, 300
Empyema, Resection of Ribs in, 222
Empyema, Treatment of, Antiseptic, 186
Endometritis, Corporeal, Diagnosis of, 414
Entropium, Operations for, 430
Epilepsy and Insanity, 107
Epilepsy, Bromide of Ethyl in, 658
Epilepsy, Heredity, and Crime, 107
Epilepsy, Syphilitic, 665
Epilepsy with Consciousness, 645
Epiphyal Bone, 441
Epithelioma of the Body of the Uterus, 66
Epithelioma of the Cervix Uteri, 413
Ergot in Diabetes, 654
Erysipelas, Salicylate of Sodium in, 655
Erythrophleine, 326
Eserine in Keratitis and Glaucoma, 427
Ethics, a Matter of, 558
Ethyl Bromide as an Anæsthetic, 176
Ethyl Bromide in Hysteria and Epilepsy, 658
Eustachian Tube, Functions of, 432
EVETZKY, E. On the Nature of Cataract, and on its Treatment with Electricity; with the Report of a Case, 6
Exhaustion, Nervous, Nitrous Oxide in, 111
Exophthalmus, Pulsating, 430
Exostoses, Auditory, in Prehistoric Man, 102
Exostoses of External Auditory Canal, 100
Eye, Enucleation of, Tetanus after, 98
Eye, Inflammation of, Septic, 428
Eyelids, Eczema of, 97
Eyelid, Suppuration in, from Dental Caries, 429
Eyelids, Tumors of, Vascular, 240

PAGE
Eye, Operations about, Antiseptic Method in, 96
Eyes, Care of, 97
Eyes of Soldiers, with Special Reference to Optometry, 98

Face, Modifications of, in Health and Disease, 561
Fallopian Tube, Rupture of, 86, 522
Fallopian Tube, Suppuration and Rupture of, 522
Ferment, Milk-curdling, 445
Ferments, Digestive, 448
Fever, Intermittent, Pilocarpin in, 128
Fever, Origin of, 313
Fever, Puerperal, Prevention of, 29
Fever, Relapsing, Choroiditis after, 96
Fever, Scarlet, following Operations, 206
Fever, Typhoid, Salicylate of Sodium in, 655
Fever, Typhus, Auditory Organ in, 101
Fevers of Infancy, Hot Baths in, 199
Fibula, Fracture of Upper Third of, from Indirect Violence, 189
Fibro-Myoma of the Uterus, 184
Fibro-Myoma of the Uterus, Sub-mucous, Enucleation of, through
  an Abdominal Incision, 417
Fibro-Myomata of the Uterus, Hæmorrhage from, 417
Ficoin, 656
Fistula, Vulvo-rectal, 82
Florida as a Resort for Consumptives, 337, 479
Fœtus, Death of, Acoustic Sign of, 75
Food, Artificially Digested, 443, 446
Food, Peptonized, 447
Forceps, Obstetrical, Mechanics of, 76
Forceps, Obstetrical, Tarnier's, 406
Foreign Body in the Eye, 93, 95, 97, 429
Foreign Body in the Rectum, 195
Fossæ, Nasal, Anatomy of, 375
Fracture of Upper Third of Fibula from Indirect Violence, 189
Frogs, Lead Poisoning in, 370
Frostbite, 61

Ganglia, Cerebro-spinal, Nerve Cells of, 221
Ganglion, Treatment of, by Lister's Method, 191
Gangrene of the Appendix Vermiformis, 306
Gangrene of the Skin, Multiple Cachectic, 548
Gastrocnemius Muscle with One Head, 441
Gastro-Enteritis, Acute, in Infants, Benzoate of Sodium in, 657
Genito-urinary Diseases, Quarterly Reports on, 328, 659
Genu Valgum, Osteotomy for, 218, 556
Genu Valgum, Treatment of, 214
Gland, Vulvo-vaginal, Cyst of, 81
Glands, Enlargement of, Strumous, Green Soap in, 658
Glaucoma, Crucial Sclerotomy in, 427
Glaucoma, Eserine in, 427
Glaucoma, Sclerotomy in, 427
Goître, Exophthalmic, Duboisia in, 327
Gonorrhœa, Treatment of, 526
Gout, 645
Gout, Treatment of, Dietetic, 315
GRISWOLD, GASPAR. Pilocarpin in Intermittent Fever, 128
Gynæcology, Quarterly Reports on, 79, 410

PAGE
Hæmatocele, Pelvic, 399
Hæmorrhage, Post-partum, 410
Hæmorrhage, Uterine, due to Fibro-Myomata, 417
Hair, Nodose, 211
Hallux Valgus, 556
HAMMOND, WILLIAM A. The Therapeutical Use of the Magnet, 449
Heart Disease, Anæmia as a Cause of, 315
Heart Disease, Apoplexy of Lung from, 317
Heart, Sounds of, Whooping-Cough and, 198
Hemianæsthesia treated with Static Electricity, 652
Hemicrania, Cannabis Indica in, 653
Hemiplegia, with Aphasia and Facial Paralysis, 521
Heredity, Epilepsy, and Crime, 107
Hernia, Double Congenital Inguino-ovarian, 189
Hernia in Children, 203
Hernia, Inguinal, Strangulated, 296
Herniotomy, 296
Herpes Desquamans, 547
Herpes Gestationis, 209
Herpes of the Cornea, Febrile, 95
Hip, Disease of, Parallelism of Lower Limbs in Treatment of, 216
Hip, Injury of, Parallelism of Lower Limbs in Treatment of, 216
Hip Joint, Excision of, 216, 218
Hip, Osteo-Arthritis of, 215
Hospital, Bellevue, Clinical Reports of, 59, 521
Hospital, Dresden City, Cases treated in the Dermatological Division of, 546
Hospital, New York, Clinical Report of, 294
HOWE, JOSEPH W. A Successful Case of Transfusion of Blood, 152
Hydrophobia Treated with Curare, 652
Hygiene of Children, Summer, 202
Hyoscyamia, 654
Hyperpyrexia, 314
Hypertrophy of the Stomach, Progressive, 307
Hypodermic Doses of Morphia, Large, 327
Hysterectomy by Freund's Method, 86
Hysterectomy, Vaginal, 84
Hysteria, Bromide of Ethyl in, 658
Hysterical Vomiting, 305

Impulse, Morbid, 108
Injection, Vaginal, of Hot Water, as a Hæmostatic, 82
Insanity and Epilepsy, 107
Insanity, Emotional, Medico-legal Relations of, 108
Insanity, Epileptic, Testamentary Capacity in, 107
Insanity, Mind, and Crime, 107
Insanity, Puerperal, 396
Insanity, Syphilitic, 108
Instrument for introducing Uterine Bougies, 65
Instrument for keeping the Tracheal Incision open after Tracheotomy, 188
Instrument for the Removal of Particles of Iron or Steel from the Vitreous, 308
Instruments for Decapitation, 76
International Medical Congress, 669
Intestinal Obstruction, 320
Intra-uterine Medication, 42, 83, 84

PAGE
Inversion of the Urethra, ... 399
Iodide of Starch in Lupus Erythematosus, ... 210
Iodoform in Gynæcological Practice, ... 415
Irrigation of the Uterus after Delivery, ... 410

Jamaica Dogwood, ... 326
Joint, Elbow, Resection of, Osteoplastic, ... 554
Joint, Hip, Excision of, ... 556
Joint, Knee, Excision of, ... 554
Joint, Temporo-maxillary, Anchylosis of, ... 299
Joints, Chronic Inflammation of, in Children, Treatment of, . 558
Jugular Reflux Regurgitation, ... 316

KATZENBACH, W. H. A Report of Six Cases of Pleuritic Effusion treated by Aspiration, ... 146
KELSEY, CHARLES B. An Analysis of One Hundred and Forty Cases of Excision of Cancer of the Rectum, . . . 608
KENWORTHY, C. J. On Climate in the Prevention and Cure of Pulmonary Consumption, with Special Reference to the Peninsula of Florida, ... 337, 479
Keratitis, Eserine in, ... 427
Keratitis, Neuroparalytic, ... 95
Keratitis, Parenchymatous, ... 435
Kidney, Sarcoma of, ... 180
Knee, Resection of, ... 218
Knee, Synovial Membrane of, ... 441

Labor, Second Stage of, Management of, ... 695
Labyrinth, Disease of, ... 101
Laceration of the Urethra, ... 334
Lachrymal Passages, Alteration of Function in, Complications from, 95
Lachrymal Sack, Suppuration of, Boracic Acid in, ... 426
Laminaria Tents, ... 415
Laparo-Elytrotomy, ... 406
Laparotomy for Purposes of Diagnosis, ... 196
Laparotomy for the Enucleation of a Sub-mucous Fibro-Myoma of the Uterus, ... 417
Larynx, Abductor Muscles of, Paralysis of, ... 460
Larynx, Disease of, in Congenital Syphilis, ... 193
Larynx, Extirpation of, ... 540
Larynx, Removal of Half of, ... 307
Larynx, Tumors of, Removal of, through External Incisions, . 540
Lead Colic treated with Electricity, ... 652
Lead Poisoning in Frogs, ... 370
LEE, WILLIAM. The Treatment of Whooping-Cough with Atropia used hypodermically and Carbolic-Acid Inhalations, . . . 84
Leprosy, the Bacillus of, ... 669
Lithotrity, ... 332
Lithotrity, Rapid, with Evacuation, ... 332, 668
Liver, Disease of, Syphilitic, Congenital, ... 309
Localization, Cerebral, ... 442
LORING, EDWARD G. An Improved Operation for a New Pupil after Cataract Operations, ... 496
Lunatic Asylums, Management of, ... 109, 110
Lupus, ... 209
Lupus Erythematosus, Iodide of Starch in, ... 210

PAGE
Lupus, Multiple Linear Scarification for, 210
LUSK, WILLIAM T. On the Management of the Second Stage of Natural Labor, 595

Magnet for Removal of Steel or Iron from the Vitreous, 97
Magnet, Therapeutical Use of, 449
Malformations of Upper Limbs, 529
Marine-Hospital Service, 224, 387, 560
MASON, JOHN J. Lead Poisoning in Frogs: Article II, 370
Mastoid Disease, 101
Mastoid Process, Acute Affections of, Management of, 433
Mastoid Process, Periostitis of, Primary, 102
Materia Medica, Quarterly Reports on, 321, 648
Medication, Intra-uterine, 42, 83, 84
Medicine, General, Quarterly Reports on, 306, 640
Melancholia, Nitrous Oxide in, 111
Membrana Tympani, Manometric Cicatrix in, 432
Memory, Influence of Shock on, 108
Ménière's Disease, 100
Meningitis, Cerebro-spinal, 60
Menorrhagia, 413
Menstrual Coagula, Intra-uterine, 83
Menthol, 656
Metaphosphoric Acid as a Test for Albumen, 320
Metastases of Tumors within the Serous Channels of the Nervous System, 220
Metrorrhagia, Treatment of, 82
Microtome, New, 309
Mind, Insanity, and Crime, 107
Morphia, Hypodermic Doses of, Large, 327
Morphia in Puerperal Convulsions, 409
Movement as a Therapeutic Agent, 551
Myelitis, Transverse, with Optic Neuritis, 96

Nævi, 204
Nævus, Linear Scarification for, 548
Nævus, Pigmentary, 547
Nasal Fossæ, Anatomy of, 375
Nephrotomy, 194, 332, 333
Nerve Cells of the Cerebro-spinal Ganglia, 221
Nerve, Pneumogastric, Removal of a Portion of, 543
Nerve, Sciatic, Effects of Removal of a Portion of, in Rabbits, 443
Nerves, Sensitive, Electrotonus of, 557
Neuralgia, Tonga in, 325
Neuralgia, Trigeminal, Ammoniacal Sulphate of Copper in, 656
Neurectomy, Optico-ciliary, 306, 429
Neurotomy, Optico-ciliary, 92, 93, 94, 429
Nitrous Oxide in Melancholia and Nervous Exhaustion, 111
Noises in the Ear, Subjective, 101

Obstetrical Forceps, Mechanics of, 76
Obstetrician, whether he may make Autopsies, 538
Obstetrics, Quarterly Reports on, 72, 401
Obstipation, Obscure Case of, 522
Obstruction, Intestinal, 174, 320
Œdema, Acute Rheumatismal, 645

PAGE
Œsophagus, Foreign Bodies in, 527
Operation, Battey's, 86, 183, 420
Operation, Boucheron's, for Squint, 430
Operation, Cæsarean, 406
Operation for a New Pupil after Cataract Operations, 496
Operation for Cleft Palate, 542
Operation, Porro's, 77, 184, 406, 407, 408
Operations for Elongated or Contracted Prepuce, 334
Operations for Entropium, 430
Ophthalmology, Quarterly Reports on, 87, 420
Ophthalmoscope, 95
Opium Poisoning, 525
Oppenheimer, Henry S. The Anæsthetic Effect of Cold upon the Cornea as a Therapeutic Measure, 1
Optic Neuritis, with Transverse Myelitis, 96
Orchitis, Epidemic, 661
Orthopædic Surgery, Quarterly Reports on, 212, 550
Osteo-Arthritis of the Hip, 215
Osteophytes in the Temporal Bone, 102
Osteotomy for Genu Valgum, 218, 556
Otitis Interna, Heredito-syphilitic, 435
Otitis Media, Catarrhal, 435
Otitis Media, Purulent, from Pharyngeal Diphtheria, 100
Otology, Quarterly Reports on, 98, 431
Ovaries, Removal of, for Fibrous Tumor of Uterus, 64
Ovariotomy, Antiseptic, 419
Ovariotomy, Methods of dealing with the Pedicle in, 419

Pachymeningitis, Hæmorrhagic, Petrous Bone in, 434
Palate, Cleft, Operation for, 542
Panophthalmitis, Metastatic Embolic, 426
Panophthalmitis, Neuroparalytic, 95
Panophthalmitis, Puerperal, 428
Papaine, 656
Papilloma, Congenital Neurotic, 547
Paracentesis in Pulmonary Cavities, 318
Paralysis, Facial, and Aphasia, with Hemiplegia, 521
Paralysis, General, 105
Paralysis of the Abductors of the Larynx, 460
Paralysis of the Chorda Tympani, Traumatic, 101
Paralytic Affections in Children, 38
Paramastoid Process, 441
Parietal Bone, Congenital Loss of Substance in, 441
Parotitis, Acute, Pathological Histology of, 248
Peabody, George L. A Supplementary Note on Persistent Priapism, 272
Pelletiérine, 325
Pepsin, 324
Pepsin and Trypsin, Action of, 445
Pepsins, Vegetable, 656
Peptonized Food, 447
Pericystitis after Aspiration of the Bladder, 305
Perinæum, Treatment of, Obstetric, 77
Periœsophagitis, 542
Peritoneal Shock, Nature of, 418
Peritonitis after the Use of the Uterine Curette, 305
Peritonitis from Rupture of Fallopian Tube, 522

PAGE
Peritonitis without Characteristic Symptoms, 397
Petrous Bone in Hæmorrhagic Pachymeningitis, 434
Pharynx, Removal of, 307, 540
Phthisis, Acute, Curability of, 647
Physiology, Semi-annual Report on, 435
Pilocarpin in Diabetes, 675
Pilocarpin in Intermittent Fever, 128
Piscidia Erythrina, 326
Plaster-of-Paris Bandage, Method of removing, 504
Pleuritic Effusion, 319
Pleuritic Effusion, Aspiration in, 146
Pneumonia, Acute Lobar, 306
Pneumonia, Bloodletting in, 319
Pneumonocele, Spontaneous, 190
Poisoning, Aconite, 308
Poisoning, Atropine, 326
Poisoning, Chloroform, 658
Poisoning, Chromic-Acid, 66
Poisoning, Lead, in Frogs, 370
Poisoning, Opium, 525
Poisoning, Quassia, 650
Poisoning, Rhus, 548
Poisoning, Santonin, 659
Polypi, Nasal, Removal of, by Galvanic Cautery, 194
Polypus, Aural, Alcohol in, 435
Polypus, Nasal, Recurrent, 62
Pott's Disease, Muscular Atrophy in, 552
Poultices, Modus Operandi of, 651
Prepuce, Contracted, Operations for, 334
Prepuce, Elongated, Operations for, 384
Priapism, Persistent, 272
Prizes, Alumni, 335
Probe, Uterine, Slippery-elm, 65
Prolapsus Ani, 225, 353, 524
Pruritus Vulvæ, 396, 399
Psychological Medicine, Semi-annual Report on, 103
Puerperal Convulsions, 409, 627
Pulmonary Tuberculosis, 646
Purple, Visual, 619
Pyonephrosis, Calculous, 382, 383

Quassia Poisoning, 659
Quinine in Diphtheritic Conjunctivitis, 92
Quinine, Temporary Blindness from, 94
Quinine with Nervous Sedatives, 653

RANNEY, AMBROSE L. Are the Benefits to be derived from Internal Urethrotomy, as now advocated for the Relief of Stricture, commensurate with its Dangers? 113, 262
RANNEY, AMBROSE L. The Human Face; its Modifications in Health and Disease, and its Value as a Guide in Diagnosis, 561
Rectotomy, External, 302
Rectum beginning on the Right Side, 441
Rectum, Cancer of, Excision of, 608
Rectum, Foreign Body in, 195
Rectum, Imperforate, 199, 204

PAGE
Rectum, Prolapse of, ... 225, 353, 524
Rectum, Stricture of, Point in the Diagnosis of, ... 162
Regurgitation, Jugular Reflux and Tricuspid, ... 816
REVIEWS AND LITERARY NOTES:
  American Armamentarium Chirurgicum, ... 292
  Atkinson's Therapeutics of Gynæcology and Obstetrics, . 172
  Balfour's Comparative Embryology, ... 680
  Bartholow's Practice of Medicine, ... 507
  Bastian on the Brain as an Organ of Mind, ... 637
  Beard on Sea-sickness, ... 283
  Bucknill on the Care of the Insane, ... 513
  Conklin on the Influence of School Life on the Eyesight, . 283
  Cripps on Cancer of the Rectum, ... 51
  Dalby on the Education of Deaf Children, ... 514
  Day on Headaches, ... 171
  Dowse on Neuralgia, ... 515
  Dunglison's Practitioner's Reference Book, ... 517
  Emmet's Gynæcology, ... 54
  Ercolani on the Utricular Glands, ... 164
  Flint on Auscultation and Percussion, ... 171
  Foster's Physiology, ... 290
  Fothergill's Handbook of Treatment, ... 516
  Fox's Illustrations of Skin Diseases, ... 55
  Fraser on Alcohol, ... 289
  Goodell's Gynæcology, ... 277
  Gowers on Diseases of the Spinal Cord, ... 285
  Granville on Mind Troubles, ... 288
  Greene's Medical Chemistry, ... 53
  Gross on Tumors of the Mammary Gland, ... 390
  Guttmann on Physical Diagnosis, ... 167
  Hale on the Management of Children, ... 289
  Hamilton on Fracture of the Patella, ... 392
  Hartshorne on Our Homes, ... 170
  Heinigke on Homœopathic Drugs, ... 287
  Hewitt on Diseases of Women, ... 509
  Hutchison's Orthopædic Surgery, ... 280
  Jackson's Black Arts in Medicine, ... 290
  James on Sore Throat, ... 171
  Kennedy on Fatty Heart, ... 54
  Keyes on Venereal Diseases, ... 45
  Klemm on Muscle-Beating, ... 168
  Kraus on Carlsbad Springs, ... 278
  L'Année Médicale, ... 393
  Leonard on the Hair, ... 56
  Leonard's Dose Book and Anatomist, ... 518
  Lücke on the Diagnosis of Tumors, ... 291
  Mac Cormac on Antiseptic Surgery, ... 276
  Medical Register of New York, etc., ... 292
  Morris on Skin Diseases, ... 55
  Napheys's Modern Medical Therapeutics, ... 291
  Nepveu's Mémoires de Chirurgie, ... 168
  Packard on Sea-Air and Sea-Bathing, ... 172
  Poulet on Foreign Bodies, ... 169
  Putzel on Functional Nervous Diseases, ... 635
  Reynolds's System of Medicine, ... 287
  Rottenstein's Traité d'Anesthésie, ... 391

REVIEWS AND LITERARY NOTES: PAGE
- Ruata's L'Apomorfina, ... 518
- Savage's Surgery, etc., of the Female Pelvic Organs, . 392
- Shaffer on Pott's Disease, ... 169
- Squire's Pharmacopœia of the British Hospital for Diseases of the Skin, ... 290
- Student's Aids Series, ... 291
- Sturgis on Venereal Diseases, ... 49
- Transactions of the American Gynæcological Society, . 517
- Trousseau and Pidoux's Therapeutics, . . . 286, 516
- Tyson on the Examination of the Urine, ... 287
- Virchow on Post-mortem Examinations, ... 167
- Wilson on Health and Health-Resorts, ... 170
- Wilson's Health and Healthy Homes, ... 288
- Wythe's Microscopist, ... 512

Rheumatism, Acute Articular, Salicylic Acid in, ... 669
Rheumatismal Œdema, Acute, ... 645
Rhus Poisoning, ... 548
Ribs, Resection of, in Empyema, ... 222
Ringworm of the Scalp, ... 211
Ringworm, Tokelau, ... 547
Rötheln, Diagnosis of, ... 211
Rupture of the Middle Meningeal Artery from Injury, . . . 190
Rupture of the Uterus, ... 408

Salicylate of Calcium in Serous Diarrhœas of Infants, . . 655
Salicylate of Sodium in Typhoid Fever and Erysipelas, . . 655
Salicylic Acid in Acute Articular Rheumatism, ... 669
Santonin Poisoning, ... 659
Sarcoma of the Kidney, ... 180
Sclerotomy, Crucial, in Glaucoma, ... 427
Sclerotomy in Glaucoma, ... 427
Septum Narium, Lateral Deviation of, ... 527
Shock, Peritoneal, Nature of, ... 418
Skin, Gangrene of, Multiple Cachectic, ... 548
Skull-Cap, Irregular Deficiencies in, ... 439
Slippery-elm Probes and Dilators, ... 65
Soap, Green, in Strumous Enlargement of Glands, . . 658
Society, New York Clinical, Proceedings of, . . . 299, 525
Society, New York Obstetrical, Proceedings of, . 64, 180, 395
Society of German Physicians, New York, Proceedings of, . 306
Society, Therapeutical, of New York, Proceedings of, . . 66
Sound, Vermicular, New, ... 332
Spina Bifida, Excision of, ... 189
Spinal Congestion, ... 294
Spinal Curvature, Jackets for, ... 558
Spine, Curvature of, Lateral, Plaster-of-Paris Jacket in, . . 215
Spine, Disease of, without Curvature, ... 214
Squint, Convergent, Intermittent, ... 96
Stenosis of the Pulmonary Artery, Congenital, . . . 182
Stenosis of the Stomach, ... 307
Stomach, Carcinoma of, ... 59
Stomach, Hypertrophy and Stenosis of, ... 307
Strabismus, Operation for, Boucheron's, ... 430
Stricture of the Rectum, Point in the Diagnosis of, . . . 162
Stricture of the Urethra, ... 666
Strychnia, Large Doses of, Physiological Effects of, . . . 651

PAGE
Subinvolution of the Uterus, Treatment of, ... 415
Sulphate of Cinchonidine, ... 324
Surgeon, whether he may make Autopsies, ... 538
Surgery, Orthopædic, Quarterly Reports on, . . . 212, 550
Surgery, Quarterly Reports on, ... 185, 529
Suspension in Caries of Vertebræ, ... 214
Synovial Membrane of the Knee,. 441
Syphilide of the Conjunctiva, ... 426
Syphilis acquired during Pregnancy, Can it be transmitted to the Fœtus? 663
Syphilis and the Dartres, ... 664
Syphilis, Congenital, Disease of Larynx in, ... 193
Syphilis, Conjunctival, ... 97
Syphilis, Cutaneous, Diagnosis of, ... 382
Syphilis, Earliest Constitutional Manifestations of, ... 662
Syphilis, Early Stages of, Affections of the Middle Ear in, . 433
Syphilis, Hereditary, ... 528
Syphilis in the French Army, ... 330
Syphilis, Treatment of, ... 665
Syphilis, Treatment of Early Period of, ... 381
Syphilitic Disease of the Liver, Congenital, ... 309
Syphilitic Disease of the Tongue, ... 304
Syphilitic Epilepsy, ... 665

Telephone, Ear, ... 435
Temperature after Death, ... 441
Temperature of the Thoracic Wall in Lung Diseases, . . . 647
Teratoma, ... 526
Tetanus after Enucleation of Eye, ... 93
Therapeutics, Quarterly Reports on, ... 321, 648
Thyroidea Ima Artery, ... 441
Tinea Imbricata, ... 547
Tobacco, Effects of, ... 304
Tonga in Neuralgia, ... 325
Tongue, Base of, Removal of, ... 307, 540
Tongue, Disease of, Syphilitic, ... 304
Tongue, Removal of, by Median Division, ... 192
Toxicology, Quarterly Reports on, ... 321, 648
Tracheal Tubes, Introduction of, by the Mouth, ... 539
Tracheotomy, Instrument for keeping the Tracheal Incision open after, ... 188
Transfusion of Blood, ... 152
Tricuspid Regurgitation, ... 316
Trypsin and Pepsin, Action of, ... 445
Tuberculosis, Pulmonary, ... 646
Tuberculosis, Pulmonary, with Secondary Infection of the Colon, . 306
Tumors, Metastases of, within the Serous Channels of the Nervous System, ... 220
Tumors of the Eyelids, Vascular, ... 240
Tunica Vaginalis, Distention of, from Paracentesis Abdominis, 525
Turpentine, Chian, in Cancer of Uterus, ... 85

Ulcer of Duodenum, Perforating, ... 308
Umbilical Cord, Expression of, ... 78
Umbilical Cord, Laceration of, ... 182
Umbilicus, Eczema at, ... 204

PAGE
Uræmia, 300
Urechites Suberecta, Physiological Effects of, 653
Urethra, Inversion of, 399
Urethra, Laceration of, 334
Urethra, Stricture of, 666
Urethral Caruncle, 399
Urethrotomy, Internal, 113, 262
Uterus, Anteversion of, 416
Uterus, Body of, Epithelioma of, 66
Uterus, Cancer of, Chian Turpentine in, 85
Uterus, Carcinoma of, 401
Uterus, Dilatation of, 415
Uterus, Fibro-Myoma of, 184
Uterus, Fibro-Myomata of, Hæmorrhage from, 417
Uterus, Hour-Glass Contraction of, before Birth of Child, 76
Uterus, Irrigation of, after Delivery, 410
Uterus, Rupture of, 408
Uterus, Subinvolution of, Treatment of, 415
Uterus, Total Extirpation of, 418
Uterus, Tumor of, Fibrous, Removal of Ovaries for, 64

Vaccination, Animal, 211
Vaccinium as a Diuretic, 325
VAN BUREN, W. H. On Prolapsus Ani, 225, 353
Veins upon the Temporal Bone, Ectasia of, 432
Venereal Diseases in the French Army, 330
Venereal Diseases, Quarterly Reports on, 328, 659
Version, External, 76
Vertebræ, Caries of, Suspension in, 214
Visual Purple, 619
Vomiting, Hysterical, 305
Vulva, Pruritus of, 396, 399

WACKERHAGEN, G. A Convenient and Rapid Method of removing Plaster of Paris, when applied in the Form of a Continuous Roller, 504
WEIR, ROBERT F. Renal Calculi: their Causation, Character, Symptoms, Treatment, and Prevention, 153
WENDT, EDMUND C. A Contribution to the Pathological Histology of Acute Parotitis, 248
WENDT, EDMUND C. The Histology of the Blood Vessels, 20
Whooping-Cough and the Sounds of the Heart, 198
Whooping-Cough, Treatment of, with Atropia and Carbolic Acid, 34
Wounds, Treatment of, 535, 536

THE
NEW YORK
MEDICAL JOURNAL.

JULY, 1880.

Original Communications.

THE ANÆSTHETIC EFFECT OF COLD UPON THE CORNEA AS A THERAPEUTIC MEASURE.*

By HENRY S. OPPENHEIMER, M. D.,
RESIDENT SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY.

The persistence, in some cases of diseases of the cornea, of the symptoms of pain and photophobia, combined with blepharospasm at times, in spite of the usual treatment, is well known to every one here. They are often as much a source of embarrassment to the surgeon as of torture to the patient. One of these perplexing cases, in a patient of Dr. Noyes's, was in my charge at the New York Eye and Ear Infirmary last November. In the search after an available agent which should render the cornea anæsthetic, it occurred to me that extreme cold was such a one, and that water at 32° F. (melted ice, in fact) dropped upon the cornea, might be efficacious for the purpose. Dr. Noyes very kindly permitted me to try it on his patient. The experiment proved so strikingly successful in this first case that I have since put it in use repeatedly. So far as my experience with it has enabled me to judge, it has convinced me that the remedy is a valuable one in most of the cases where disease or injury of the cornea is the cause of pain and photophobia, with or without blepharospasm. I am indebted to Dr. Noyes, Dr. Bull, Dr. Gruening, and Dr. Cutter for permission to use the cold on some of their patients, and to the three last-named gentlemen and Dr. Shorter for reports of cases in which they themselves had observed the action of the remedy.

---

* Read before the New York Ophthalmological Society, May 10, 1880.

I have so far gathered twenty-five cases. Of these, four were insterstitial, two diffuse (non-interstitial), and ten phlyctenular keratitis. Five were cases of pannus, one was inflamed staphyloma, and three were superficial wounds of the cornea from scratching with different substances. I have not experimented with it in any case of suppuration of the cornea, if I except one—that of a patient of Dr. Bull's, in which one or more phlyctenulæ had broken down, and thus left an ulcerating surface on the cornea. In this case the cold was borne badly, and had to be discontinued. I hope I shall not trespass too much upon your time if I give the details of the first case:

Case I.—L. F., aged five years, was admitted, in Dr. Noyes's service, November 5, 1879, with parenchymatous keratitis in both eyes, of over six months' duration. No history of hereditary syphilis could be obtained from his father, nor did the child's teeth, face, or palatine arch show any evidence of this. His photophobia and blepharospasm were of the most intense character. The boy lay with his face bored into the pillow, and cried out with pain, or apprehension, when an attempt was made to turn him over, even in the darkened ward. He had to be coaxed to eat, and would do so only with a thick towel tied across his eyes. The blepharospasm was so violent that it was impossible to see his cornea without complete anæsthesia. When seen, this was found opaque in both eyes, with a dense vascular region in the upper outer quadrant of the right one. He was treated in succession with mercurial inunctions, iodide of potassium, sirup of the iodide of iron and cod-liver oil, fluid extract of conium up to ten-drop doses three times a day, together with applications of cold and warm water to the lids in turn. For one week the eye was exposed to the light twice a day, while the patient was under the influence of chloroform, according to the method recommended by Dr. Agnew, and forcible overstretching of the lids was also resorted to; but all this was without marked benefit at the end of a month. On December 4th, with Dr. Noyes's consent, I directed that the child's eyes be forcibly held open and filled with ice-water every half hour in the day. The first few hours he resisted and screamed, but toward evening he submitted without crying.

The next day he remained lying on his back with a towel tied over his eyes, tolerating the instillation of the water patiently. On the third day I removed the towel, but he held his arm over his eyes. At the end of a week he was induced to keep his arm down and to sit up. When the second week had passed he was playing about the room with another child. He was discharged on December 26th, twenty-two days after the beginning of the ice-water treatment, able to see to pick up a pin from the floor. His eyes were free from all injection and photophobia. Some slight opacities remained in the cornea.

CASE II.—A girl, aged fifteen years, also a patient of Dr. Noyes's, was admitted December 5th, with interstitial keratitis. She had such a hazy cornea, with dread of light, that she had to be led. Her photophobia disappeared promptly under the ice-water treatment, but the corneal and circumcorneal vascularity was much slower to yield. She left the institution on January 25th, fifty-one days after admission, without any photophobia or injection, and with her cornea much clearer.

The third case of interstitial keratitis, in a boy ten years old, a patient of Dr. Bull's, showed no marked improvement in the first two weeks of this treatment, excepting the reduction of the photophobia. In a month the vascularity had disappeared almost completely. In the fourth case, that of a girl of twelve years, the photophobia and injection disappeared before the end of the third week, and one cornea was almost free from opacity. The other cornea, similar to that in Case III, remained opaque, white, and somewhat flattened. Tension in these two eyes was lessened; whether this was effected by the cold must remain an open question. The one in the boy has, since then, cleared up decidedly under the application of warm compresses.

Of the two cases of diffuse keratitis, one, in a hard-worked, broken-down woman of thirty-six years, was well in less than a week. The second case, kindly reported to me by Dr. Bull, was in a girl of fourteen years, affected with a combination of diffuse and phlyctenular keratitis. She had suffered similar attacks at different times for years. Dr. Bull says the photophobia was great, and there was some blepharospasm. After the second or third application he noticed improvement, consisting in the gradual fading out of the injection and lessening of the photophobia. The case was cured in three weeks.

In ten patients with phlyctenular keratitis, eight were relieved promptly of the photophobia—two of these, in the words of Dr. Fridenberg, the gentleman who had charge of them in the hospital for Dr. Gruening, who was kind enough to report them to me, almost miraculously. In one, the patient of Dr. Bull's, mentioned above, the cold seemed to increase the pain. The tenth, an ambulant little patient of four years, demonstrated to me the difficulty that will probably be encountered in this treatment in many such cases. She would not permit her mother to open her eyes.

In four of the five cases of pannus with granular lids improvement was noticed the second day. In one of these, for the report of which I am indebted to Dr. Shorter, the pain and photophobia subsided entirely in a week. In another case, in a patient of Dr. Noyes's, these symptoms, although complicated by an irritating entropion, subsided completely in eighteen days. The three others were entirely relieved in from six to eleven days. Of these patients, one, a farmer aged fifty-six years, said he had not slept one hour in two weeks on account of the pain. The pannus in his case was not very great, but in the center of the cornea a minute ulcer could be seen. Photophobia was very severe. He looked pale, nervous, and exhausted. On inquiry, he stated that in his neighborhood they had no malaria, but that neighbors living a few miles away were frequently afflicted with it. Besides the ice-water locally, he was ordered three grains of quinine three times a day. The next day he looked brighter, and had had a good night's rest. In eight days his eye was well and his lids were improved. Six weeks after this he returned with another attack, similar to the first. The cold was used for three days, but without benefit. It was discontinued, and the patient was given ten grains of quinine three times a day. He began to improve at once, and in a week he was well. Here, then, the water certainly was not the curative agent.

One case of inflamed staphyloma, in a patient of Dr. Noyes's, was markedly relieved by this remedy for about a week; after this the patient developed a cyclitis, and the cold had no effect in relieving the pain of this affection.

Lastly, this treatment was tried in three cases of superficial scratches of the cornea: one, in a woman of twenty years, caused by a child's finger-nail; the second, in a laborer of thirty years, produced by contact with the edge of a starched shirt-collar; the third, in a mechanic aged forty-five years, made by a thread of brass filing from a lathe. These three eyes, all seen on the day of injury, were extremely painful and sensitive to light. Professor Arlt says of such injuries that they rarely get well in less than from eight to fourteen days. The first two of these three patients reported on the next day that they were well. The scratch could still be seen, but there was no longer any injection or photophobia. They were told to report in case there should be any further pain or annoyance. They promised to do so. Neither was ever seen again, and so it is fair to assume that they remained well. The third patient, scratched with a brass filing, presented himself on two successive days, and was then dismissed in the same condition and with the same instructions as the two others. He remained away. Two months later he presented himself, showing a keratitis at the site of the former scratch, with considerable haziness in the neighboring corneal tissue. He stated that his eye was perfectly well after he had been seen last until two days before his reappearance. Then, while crossing the river on a cold day, and looking up at the Brooklyn bridge, he suddenly felt a violent pain in the eye that had formerly been injured. His kerato-iritis disappeared under the use of leeches, atropine, warm water, and the bandage.

I presume it is scarcely necessary to say that, in commending this mode of local treatment, I do not advise it to the exclusion of other remedies, whether for local or for general effect. On the contrary, I do not see why atropine or antiseptics locally applied should not be used in conjunction with extreme cold; and any indications for general treatment, such as tonic or specific medication, or improvement in the hygienic surroundings or alimentation of the patient should, in my opinion, be carefully fulfilled. In most of the cases here reported this has been done as far as possible. In those under my own observation I carefully noted the condition of the patient subjectively and objectively before the ice-water instillation was begun, and in the majority of the cases this was commenced only after the other treatment had been tried for some time. This time necessarily varied in length in the different cases. In this manner I have satisfied myself that cold, used in the way proposed, is a valuable adjuvant to the other treatment indicated.

The directions usually followed were to drop the water, as cold as it could be gotten from melting ice, into the eye, while the patient himself, or the attendant, held the eye wide open. This was kept up for a few minutes every half hour or hour. As the eye improved, these intervals were lengthened. An eye-dropper or sponge was used to drop the water from. The mode of action of the cold seems to me, from its effect, to be probably a double one. The lessening of the photophobia may be due to temporary paralysis of the more superficial plexuses of corneal nerves, while the subsidence of the injection may be accounted for through its astringent effect. It is also possible that the antiseptic effect of cold may have a slight influence.

The cases I have reported here are too few in number, and I am painfully aware that the observations are too crude, to be conclusive. I should be glad to have this remedial measure given an extensive trial by those more competent to judge than myself. I have looked in vain through all the literature accessible to me for any mention of it. The old treatment—I could not find out by whom it was first recommended—of immersing the patient's face in water, and expecting him to open his eyes in it, comes nearer to this than any thing I have been able to find in print. But this has been recommended only for phlyctenulæ, as far as I know, and no particular temperature of the water has been insisted on, I believe. Practically it is not so good, because the majority of these patients are children, and it would generally be in vain to expect these little sufferers to open their eyes in the water.

ON THE NATURE OF CATARACT, AND ON ITS TREATMENT WITH ELECTRICITY; WITH THE REPORT OF A CASE.

By E. EVETZKY, M. D.,
ELECTRO-THERAPEUTIST TO THE ROOSEVELT HOSPITAL.

Dr. Neftel's article in a recent number of Virchow's "Archiv" * took not only the general profession but also the majority of oculists by surprise; yet the treatment of cataract by electricity dates forty years back. The first efforts in this direction were made by Dr. Crusell, of St. Petersburg, to whom we are indebted for many valuable suggestions in the domain of electro-therapeutics. He and his associates, Dr. Lerche, chief surgeon of the St. Petersburg Ophthalmic Hospital, various members of the hospital staff, Dr. Kabat, and others, made extensive experiments and proved conclusively that cataract was entirely curable by electrolysis. Their mode of treatment consisted in introducing into the substance of the lens a needle which, after the positive electrode had been placed on the patient's tongue, was connected with the negative pole of the galvanic battery. Short applications of a mild current resulted, in all their cases, in the liquefaction and final absorption of the cataract.

The cataract was subjected in these cases to mechanical disintegration by the needle, to the chemical influence of the negative pole in liquefying the cataract-substance, and probably also to the macerating action of the aqueous humor penetrating the lens through the puncture made in the capsule by

---

* Bd. 79, p. 465.

the needle. The inflammatory reaction as a rule was not very severe, and at times was entirely wanting. Only in rare cases was it necessary to repeat the operation a number of times, and in a series of twenty cases reported by Dr. Crusell not a single one resulted in the destruction of the eye. The same operation was attempted by others (Bergmann, Neumann, Mildner, Benedict, Strauch, and others*), but they generally pronounced against it, mainly on account of the severe and dangerous inflammation following it.

It would be useless to examine the merits and the faults of this treatment, and why it failed to become an accepted practice at the time it was proposed. Suffice it to say that, if it failed to compete with the surgery of forty years ago, it can not have the slightest advantage in our day. Although the efforts of Dr. Crusell to introduce a new mode of treatment did not succeed, still they stimulated the study of the action of electricity on the eye. Dr. Heidenreich reported that, by means of the galvanic current, he was able to produce opacities of the cornea and of the lens, which could be removed by reversing the current. These experiments were confirmed by others. Dr. Rosenthal, I believe, was the first to test the value of galvanism applied externally in the treatment of cataract. He used one or two platinum plates adjusted to the closed eyelids, while a silver plate, connected by silver wires with the other two, was placed on the patient's tongue. The applications lasted one hour, interrupted every five minutes, and were repeated at intervals of a few days. He treated in this manner three patients, of whom two were cured and one only improved. Those cured were a boy twelve years old, suffering with a ripe capsulo-lenticular cataract, and a woman twenty-six years old, having a progressive cataract; the third patient had a cataract in one eye not fully matured, and an opacity of the cornea in the other. The cataract was improved and the corneal opacity disappeared. Reports of a similar mode of treatment appeared in the current literature of the following years, but as I have not had access to them I can not speak of its further success. Next is the attempt of Dr. Tavignot* to cure cataract with the galvanic cautery. He does not give an account of the cases, but speaks very enthusiastically of the method. I do not find after this a single allusion to the subject until the appearance of Dr. Neftel's article, in which he speaks of the benefits derived from external galvanization by two patients suffering from incipient cataract.

---

* For the literature of the subject consult Canstatt's "Jahresbericht" for 1841-1845, also "Schmidt's Jahrbücher" for 1841 and 1842.

This is a short and necessarily incomplete review of the subject that attracted such attention from the profession a short time ago. Dr. Agnew, in a paper read before the Medical Society of the County of New York, in closing his remarks on the electric treatment of cataracts, said: "What may be done in the dim future it is generally presumptuous to foretell, but our belief is that a true cataract, from its essential nature, will never be cured by any other agency than a surgical one."† It would hardly be possible to formulate the general opinion of the profession in a clearer or more concise manner, and, when expressed by so high an authority, it carries almost the weight of a law. Still, it does not dispose of the question entirely, as the first part of the sentence would indicate; and, as to the second part, we have facts that would appear to question its correctness. It is but natural to question facts or statements if they go against our formed opinions, and to require facts in support of the most plausible propositions. The facts in the present case carry but little weight, since they are not numerous; still, there they are, and the question naturally arises, if our knowledge of the nature of cataract is such as to exclude the possibility of its being relieved or improved by electricity. It would be a mistake to assume that electricity is advocated as a substitute for the operation. If the results were as uniform with electricity as with surgical treatment—which can never be the case—the former could even then never take the place of the latter, which is more direct and rapid. It is only urged that we study the subject further, that the extent of possible benefit to be derived from electric treatment may be exactly known, and also in what stages and in what forms of the cataract-process it will be most useful. It would be highly desirable to have an agent that could abort or prevent the occurrence of cataract, or improve an existing one if an operation were not desirable or possible.

---

* "Gazette des Hôp.," 1859, p. 501.

† "Medical Gazette," 1880, p. 147.

Every surgeon is aware how some persons dread having any operation performed on them, of being "cut," as they express it, and how not infrequently they become reconciled to suffer with their ailment rather than muster sufficient courage to submit to operative treatment. There are also patients on whom an operation is not desirable on account of the senile feebleness of their minds and bodies, and, since in such cases frequently it is not advisable or possible to use anæsthetics, by reason of cardiac weakness or excessive irritability of the bronchial mucous membrane, the operation becomes still more trying. This class of patients forms the majority of the unsuccessful cases. Then there are cases where the sight is impaired, and yet the disease is not sufficiently advanced to allow the operation to be performed, and it is postponed indefinitely. Although the above-mentioned cases would serve as a sufficient incentive to thoroughly test the curative power of electricity, even if it should fall below what we might wish, yet our main object should be to ascertain if its use can not prevent the occurrence of the disease itself. Thus electricity, while not interfering with the operation, may yet accomplish something where the operation is shown to be undesirable or impracticable. Even in this restricted field we must not expect very much, as the utility of electricity will be limited, yet, as we believe, far greater than oculists are inclined to grant at present. Of course, in speaking of the electric treatment I restrict it to external galvanization, as electrolysis and the galvanic cautery belong to the past.

As the main argument against the usefulness of electricity is based upon our knowledge of the nature of cataract, let us see what it amounts to. From the chemical standpoint, the cataract-process is a degenerative, an atrophic metamorphosis of the lens, analogous to what occurs in every tissue under certain circumstances. According to Kühne,* the normal lens is composed of 37·5 per cent. of albuminoid substances, 2 per cent. of fatty substances, and 0·5 per cent. of salts. Laptschinsky's* analysis is very similar to that of Kühne—albumen 35 per cent., fats 0·74 per cent., salts 0·82 per cent. According to him, the amount of cholesterine diminishes and the amount of fat increases with age. During the formation of cataract the albuminoid substances coagulate, and a part liquefy and suffer fatty degeneration. The amount of fat may increase to a considerable extent. Thus, Jacobson† found in one lens 7 per cent. of cholesterine. The same was confirmed by Zehender‡ for the senile cataract, but the amount of it in the young is below the normal. Jacobson had found also an excessive amount of the carbonate of lime (7 per cent.). Microscopical examination makes this process still clearer. The first pathological change consists in an exceedingly fine dotting of the substance of the lenticular fiber. The dots gradually increase in size and number, and coalesce; the albumen coagulates; the fiber becomes distorted, and its bulging out, together with the effect of the variation of its component parts in refractive power, gives it a striated appearance. Finally, the fiber breaks down, and the myeline escapes. In the detritus can be seen the fat-globules, crystals of cholesterine, remnants of the fibers, and amorphous granules of the carbonate and phosphate of lime. According to Iwanoff, the equatorial cells suffer mucous and colloid degeneration. The older the eye, the greater is the nucleus; the younger the eye, the more extensive is the liquefaction of the lens.§ The formation of cataract would indicate, then, judging by the anatomical and chemical changes occurring in the lens, a slow and gradual impairment of nutrition, as only under similar conditions are such changes observed in the tissues.

---

* Kühne, "Physiol. Chemie" (Russian translation), p. 487.

The lens, together with the vitreous and the cornea, depends for its nutrition upon the circulation of lymph exuded from the blood-vessels of the eyeball. According to Max

---

* "Klin. Monatsbl. f. Augenheilk.," xv, p. 311.

† "Deutsch. Zeitschr. f. prakt. Med.," 1877, p. 416.

‡ "Archiv f. ges. Physiol.," xiii, p. 631.

§ A. Graefe und Th. Saemisch, "Handb. d. ges. Augenheilk.," v, 1, p. 184.

Knies,* who has made most extensive studies of the subject, the greater part of the lymph nourishing these three organs is derived from the choroid and ciliary capillaries. The retinal artery is very small, and serves mainly to supply the membrane itself; its lymph joins that of the choroid vessels. The blood-vessels of the conjunctiva nourish but a limited marginal ring of the cornea. After the lymph has traversed the retina, it moves forward through the substance of the vitreous until it reaches the lens, where it receives the ciliary lymph. Some of it enters the lens through the posterior segment and the equatorial border, but the greater part of the intra-ocular fluid passes by it into the chambers, where to it is added the lymph from the blood-vessels of the iris. After penetrating the substance of the cornea, the function of the intra-ocular fluid, so far as regards the nutrition of the parts mentioned, ceases, and it enters Tenon's capsule by Fontana's space and Schlemm's canal, and thence joins the general lymphatic circulation. It is thus evident that the lens may be divided into three parts, the nutrition of which varies in activity. Most favorably situated is the equatorial region—the lymph passing by it is most nourishing, the force of its stream here is the greatest, and the lens-tissue at the equator offers the least resistance to the entrance of the fluid. Next to it is the posterior segment, in the direct line of the intra-ocular flow, and separated from it by a layer of capsule only one third as thick as that covering the anterior segment. The center and the parts in the immediate vicinity of the anterior pole are the least actively nourished, not only because they present the greatest obstacle to the diffusion of the lymph, but also because they have to depend on a fluid already partly exhausted by other parts.† Max Knies absolutely denies the possibility of the aqueous humor penetrating the lens, as O. Becker ‡ and R. Deutschmann § are inclined to think. As to its *sources* of nutrition, the lens may be divided into two parts—the posterior segment belongs to the system of the choroid capillaries, and the equatorial region to that of the ciliary vessels. Although the tissue at the center and at the anterior pole is the least actively nourished, it presents a greater natural resistance to the degenerative action of the malnutrition—being a more inert tissue; while the equatorial region, though the best nourished, succumbs more readily, since it depends more upon its nutrition. It is impossible to say why the starting-point of cataract-formation should begin in different cases in the best or the least nourished part of the lens.

---

* Knapp's "Archives," vol. vii, p. 345.

† R. Deutschmann, "Archiv f. Ophthalm.," xxv, 2, p. 227.

‡ Graefe und Saemisch, "Handbuch d. ges. Augenheilk.," v, 1, p. 224.

§ L. c.

Considerations of the etiology of cataract reduce themselves to a study of the causes of disorders of the nutrition of the lens and of the circumstances under which they take place; and, although the subject is far from being well understood, still we can indicate some of the principal conditions. It will be better to classify them according to the seat of the primary lesion, which may be either in the lens itself, in the nature of the intra-ocular fluid and its circulation, or in the blood-vessels and in the innervation of the eyeball.

1. The conditions connected with the lens itself are manifold. We may have sclerosis of the lens resulting from the slow but unceasing deposit of the new fibers compressing the central ones and leading to the formation and the enlargement of the nucleus. This part of the lens grows to be less permeable by and presents greater resistance to the intra-ocular fluid. Besides, with the growth of the person, the eyeball, like any other organ, increases in size, and yet the lens, since it does not enlarge in the same proportion, occupies a diminished space in the intra-ocular stream; more of the fluid passes round it and less through it as the eye increases in size. These two conditions are always present in old age, and determine, partially at least, the senile condition of the lens, the stage preceding the formation of the cataract—a condition characterized by the yellowish color and diminished transparency of the lens, with some chemical signs of its degeneration. Other conditions are connected with injuries to the lens. A rent in its capsule will lead to the maceration of the lens by the aqueous and vitreous humors. Complete dislocation or any grave misplacement of the organ will materially alter the circulation of the intra-ocular fluid through it.

2. We can indicate, so far, but one alteration in the character of the intra-ocular fluid as a determining cause of cataract—the presence of sugar, which not only makes it less diffusible, but even leads to the opposite condition, as the lens loses part of its own liquid. The intra-ocular circulation may be altered, to the detriment of the lens, by adhesions of the iris to the anterior capsular layer of the lens, or by obliteration of Fontana's space and Schlemm's canal produced by chronic inflammation in the adjacent tissues.

3. Undoubtedly disturbances in the circulation of the eyeball may explain the occurrence of a great many cases of cataract. They may be produced by structural diseases of the membranes of the posterior half of the eyeball, for example, retinitis pigmentosa, leading to the posterior polar, sometimes called also choroidal, cataract. Cataract secondary to glaucoma may be placed in this group. Recently Dr. Deutschmann * has called attention to a new form of cataract—the nephritic. Whether this is due to any special changes in the intra-ocular fluid, as in diabetes, or, as is more probable, to malnutrition caused by the degeneration of the retina and choroid peculiar to the chronic nephritis, remains to be seen. The cataract may depend upon some abnormal condition of the ciliary blood-vessels. Unfortunately, the parts anterior to the ora serrata escape our observation during the lifetime of the patient. Still, we must admit such a relation. Convulsions play a very important rôle in the etiology of zonular cataract, involving the equatorial region of the lens. Of sixty-five cases collected by Arlt and Horner, † convulsions were ascertained to have occurred in early life in forty-eight. This connection may be at least partially understood by assuming the occurrence of spasms of the ciliary muscle and functional disorders of the circulation of the eyeball, leading to some permanent lesions in the ciliary region that might give rise to the formation of cataract later in life. Max Knies ‡ observed both phenomena during the convulsions, and Roehlmann confirmed the idea of vascular disor-

---

* "Archiv. f. Ophthalmol.," xxv, 4, p. 247.

† Graefe und Saemisch, "Handb. d. ges. Augenheilk.," v, 1, p. 248.

‡ "Deutsch. Zeitschr. f. prakt. Med.," 1877, p. 293.

ders. Less important, considering its frequency, although not its bearing on the subject, is the occurrence of cataract in the course of chronic poisoning by ergot.* There are two forms of chronic ergotism—in the one the disorders of the nervous system predominate, and in the other the main feature is the gangrene of various parts of the body. Both symptoms are due to the local anæmia produced by spasmodic contraction of the arteries and capillaries, and in the first form we have likewise an irritation, with subsequent paralysis, of the cerebro-spinal centers induced by the specific action of ergot. † In the course of this form of chronic ergotism, called raphania or "Kriebelkrankheit," is observed the occurrence of cataract. If we consider that one of its main features is an extreme anæmia of the cranial contents, it is easy to understand how cataract may form from the resulting disordered nutrition of the eyeball. And, that serious nutritive disorders of this organ take place if the system is subjected for a long period of time to the action of ergot, is evident from experiments on animals—in the course of chronic ergotism atrophy of the eyeball, ulcers of the cornea, and inflammations of the conjunctiva and cornea are frequently observed. ‡ As the formation of cataract is essentially a senile phenomenon, it is but natural to associate a considerable number of cases of the disease with the senile condition of the nutrition of the eyeball, which may be due either to an atheromatous condition of the cerebral vessels, or to a condition of nutrition which should properly be considered under the head of defective innervation of the eyeball.

4. It is generally admitted that local circulation is regulated not only by the centers located in the brain and spinal cord, but also by similar centers situated in the part itself. At any rate, centrifugal influences, cerebro-spinal or peripheral, are but reflexes caused by local, centripetal impressions. The effect of such an impression on the local circulation may be of three kinds: blood-vessels may contract, producing

---

* I. Meier, "Archiv f. Ophthal.," viii, 2, p. 120; De Wecker, "Annales d'Oc.," liv, 1865.

† Von Boeck, "Ziemssen's Cyclopædia," vol. xvii, pp. 909 and 917.

‡ Dybkowsky, "Lectzii Pharmacologii," Kiew, 1873, p. 613.

anæmia; they may dilate, causing a passive congestion; or, finally, the peristalsis of the capillaries may be made more active, leading to a more energetic circulation. The first effect is obtained by irritating the so-called vaso-contracting nerves; the last-named is produced if we stimulate the vaso-dilating nerves; and, if the function of both or one of these two sets of nerves is defective in some way, we shall have the second condition. The vaso-contracting nerve of the eyeball is the sympathetic; the vaso-dilating nerve is the trigeminus. It is but natural to assume that, during the senile period, or when the functional vigor of the whole system is depressed by various injurious influences surrounding or connected with the person,* this mechanism of vascular innervation, or, in other words, local nutrition, will be less active, acute, and responsive. That such a condition is actually present under the circumstances named, every oculist can readily verify by reviewing the clinical features of a number of diseases of the eye. Dr. Agnew, in the paper above mentioned, indicated some of them as present in cataract, namely, functional debility, torpor of the optic nerve, the ease with which the conjunctival circulation is disordered, etc. If we merely consider how numerous are the cases of senile uncomplicated cataract, and that its formation can only be explained from the standpoint just indicated, namely, inactive circulation and innervation of the eyeball, together with the peculiar changes in the lens mentioned above, the great importance of this etiological factor will be fully understood.

In closing the subject of the etiology of cataract, it will be proper to give some approximate idea of how the various forms of cataract range in frequency. According to De Wecker,† 2,309 cases of cataract treated at the ophthalmic clinic in the School of Medicine in Paris were classified as follows: 1,918, or 83 per cent., were senile; 36, or 1·9 per cent., were juvenile; 59, or 2·5 per cent., were congenital; 103, or 4·4 per cent., were traumatic; and 133, or 7·9 per cent., were complicated. This last group was composed of 10 diabetic cataracts, 41 irido-choroidal, 19 posterior polar, 2 capsulo-lenticular, 12 glaucomatous, and 11 *ex ablatione retinæ.* Of 349 cases treated in the Zürich clinic, 180, or 51·5 per cent., were senile cataracts; 96, or 27·5 per cent., were consecutive; 36, or 10·3 per cent., were traumatic; 23, or 6·6 per cent., were congenital; and 14, or 4·0 per cent., were the acquired cataract of young people.

---

* In connection with this subject, I would refer to the frequent formation of cataract in the course of impaired health, and also to the etiological importance of rhachitis. Out of thirty-six cases of zonular cataract collected by HORNER (Graefe und Saemisch, "Handb. d. g. Augenheilk.," v, 1, pp. 243–246), deformed teeth were found in twenty-five, anomalies of the formation of the skull in sixteen, and defective intellectual development in four.

† GRAEFE und SAEMISCH, "Handb. d. g. Augenheilk.," v, 1, pp. 470, 471.

Rational medical therapeutics consists in combating the morbid process, if its nature be known, by an agent or remedy whose properties are such as will place the affected part under new nutritive conditions leading either to the amelioration of the morbid state or to complete return to normal conditions; and, as the morbid processes in the great majority of cases consist in too active or in too sluggish nutrition, such therapeutic agents should be used as have the property either of controlling and diminishing the nutritive activity, or of stimulating and emphasizing it. As, in the case of cataract, the latter indication is to be fulfilled, we have to consider what are the properties of electricity that may be used for the purpose.

First of all, the continuous galvanic current passing through a fluid sets it in motion, and, if the current and the fluid flow in the same direction, the velocity of the fluid-current will naturally be increased; * and the influence of electricity on the molecular movement of the fluid is so great that the entire endosmotic phenomena may be reversed. It is natural, then, to expect that the passage of the galvanic current through the eye in the direction of the intra-ocular fluid will hasten its circulation, and consequently improve the nutrition of the lens. The current will produce in some degree the same effect as is obtained by evacuation of the anterior chamber, a practice used some years ago. †

---

* MORGAN, "Electro-Physiology and Therapeutics," p. 46.

† SPERINO, "Études Cliniques sur l'Évacuation Répétée de l'Humeur Aqueuse," etc. Turin, 1862.—QUAGLINO, Sulla Cura Medica della Cataratta, e sugli Effetti della Paracentesi Corneale Repetita. "Annali Univer-

The effect of electricity on the circulation depends on the kind of electricity used, the mode of using it, the condition of the vessels, etc. In using the descending continuous galvanic current we produce the same effect as if the vaso-dilating nerve were stimulated; * the circulation becomes more active, the blood-pressure rises, the exudation of lymph is greater and its quality higher on account of the increased velocity of the blood-current. Finally, I will mention the stimulating and regenerating effect of electricity on the nervous system in general.

These three properties of electricity—stimulation of the intra-ocular lymph-current, of the capillary circulation, and of the innervation of the eyeball—meet the nature of the greatest number of cataracts so directly that we may say in advance, should past experience be questioned, that *electricity will be of essential benefit not only in the treatment of incipient and advanced senile cataract, but also as a hygienic measure in improving the senile state of the eyes and preventing the occurrence of the disease itself.* Of course, cataract induced by grave lesions of the circulation or of the structure of the eyeball has no prospect of being in any way benefited by electricity, no matter in what stage the process is. Also, in some senile cataracts the process of degeneration may be so acute that electricity may fail, but the majority of uncomplicated cataracts have a fair chance of being essentially relieved, and the extent of benefit will be in a degree dependent upon how early the case began to be treated, and upon the mildness of the conditions determining it. It is important to free ouselves from the idea that cataract is an *inert lifeless thing*, with which we can deal only by the knife. Past literature † shows very numerous examples of advanced cataracts

---

sali di Medicina," Milano, 1863, p. 181.—HILDRIDGE, Sur le Traitement de la Cataracte par l'Évacuation Frequente de l'Humeur Aqueuse. "Gaz. Méd. de Paris," 1863, p. 507.

* ONIMUS et LEGROS, "Traité de l'Électricité Médicale," p. 153.

† BARBAROTTA, "Osservatore Med.," 1843, No. 5.—ULLERSPERGER, "Wien. med. Presse," ix, 1869, p. 48.—THOMPSON, "Dublin Med. Press," Dec., 1852.—RYDEL und BECKER, "Bericht über die Augenklin. d. wien. Univers.," Wien, 1867.—JÄGER, "Oesterr. Zeitschr. f. prakt. Heilk.," 1861, Nos. 31, 32.—LABENNEUR, "Ann. d' Oc.," xliii, p. 50.

cured by the unaided efforts of Nature herself, and, by placing her in the most favorable position to repair the harm which has been done, we should expect encouraging results.

It remains only to give an account of the case treated.

Mr. P., whose attention had been called to the electric treatment of cataract, placed himself under my care, stating that he had the most intense fear of an operation, and that, as he was rapidly losing his sight, he was inclined to give a fair trial to electricity; and his determination was so great that he was still disposed to persevere, even when I gave him rather a discouraging prognosis. The history of the case was as follows: He was sixty-seven years old, and had always been in very good health until last summer, when he had a severe attack of pneumonia. From this he recovered entirely, but his general health had not been good since. His sight had always been good, and he had never had any trouble with it until seventeen years ago, when he was obliged to use convex glasses. He was now using + 14. About twelve years ago he received a very severe blow on the bridge of his nose, and a year later the sight of his left eye began to grow dim. The impairment gradually increased, and for the past seven or eight years he had been able to distinguish only the degree of light. The cataract began to develop in his right eye soon after his recovery from pneumonia (August, 1879); in December he was obliged to give up reading and writing, and ever since then his eyesight had rapidly been growing worse, so that he could now (March 6th) distinguish the outlines of large objects only faintly.

The left eye had a completely developed lenticular cataract, and the lens was of a uniform dirty-yellowish color. On the right side, cataract was already considerably advanced, the lens being of a milky hue, deepest at the center. There was marked arcus senilis of each cornea. The right eye was astigmatic. With the aid of his glass he could read Nos. 8, 6, and 5 of Snellen's type (each line containing ten letters) at the ordinary reading distance, reading with an effort and making occasional mistakes.

Treatment was begun March 8th, and was repeated almost daily up to April 9th, twenty-seven applications being made in all. They consisted in placing the positive pole on the back of the neck and the negative on the closed eyelid. The current was gradually increased until the desired strength was obtained, and after ten minutes it was gradually diminished. The effect on the vision was immediate and very marked. After the first application he could read nearly the whole of type No. 4. The improvement continued, and four days later (March 12th) he could read eight

—Giehrl, "Bayr. med. Corresp.-Bl.," 1843, No. 6.—Peachy, Am. Med. and Surg. Rev.," 1861, p. 317.—Holscher, Walther und Ammon's "Journal," xxxii, p. 219.—Goubiet, "Gaz. des Hôp.," 1861, No. 113.—Warnatz, Walther und Ammon's "Journal," 1835, p. 49.

letters of type No. 2, and one letter of type No. 1. From March 12th to March 20th his sight remained about the same, his average reading power being for type No. 2—$4\frac{1}{6}$ letters he read correctly, 4 letters he read approximately, and $1\frac{5}{6}$ letters he could not read at all. Ptosis of both eyes improved considerably. I could not yet observe any decided change in the appearance of the right cataract, but the improvement in the left one had made marked progress; its dirty yellow had changed to a deep milky hue, and from being uniform in appearance it had become mottled. During the following ten days his sight became slightly duller, his average being $3\frac{5}{12}$ c.–$3\frac{7}{12}$ a.–3 m. There was no change in the right lens, but the left eye continued to improve. He could distinguish faintly the outline of his nose by lateral illumination. From April 1st to April 9th his sight became still weaker, the average being $2\frac{5}{6}$ c.–$2\frac{2}{6}$ a.–$4\frac{5}{6}$ m. The right cataract looked a little more opaque. The left lens continued to improve. April 11th, when he woke up in the morning, he found his right eye almost entirely blind, although no change for the worse had been observed on the previous evening. The right lens looked very opaque, and he could not read even type No. 8. It was evident that the energy of the cataract-process was too great to be overcome by electricity, and the treatment was discontinued.

Although the case must be pronounced a failure, and such a result could be foreseen from the first, still, even under these unfavorable circumstances, electricity accomplished some good. The acuteness of vision was raised from type No. 5 to No. 2, and, if the cataract had not progressed so rapidly, he could have had a degree of sight considerably higher than before treatment. I took particular pains to observe the action of electricity on the optic nerve, and not only was a progressive improvement noticed, but also the vision was more acute after each application. The average of thirteen trials (from March 22d to April 9th) was as follows:

	Correct reading.	Approximate reading.	Mistaken reading.
Before treatment......	2·84	3·15	4·00
After treatment.......	3·46	2·92	3·61

The cataract-process in the right lens was evidently arrested for a while, but slowly resumed its course, and in a single night obscured the vision almost entirely. At no time was there sufficient evidence to indicate that the cataract had begun to clear up. But in the left eye the good effect on the lens became evident about ten days after the beginning of the treatment, and it continued slowly until the end, when the lens presented numerous signs of the beginning of absorption—it had a milky opacity, quite deep, still permitting the eye of the observer to penetrate its substance; and in places it showed even greater improvement. As the improved perception of light was noticed only toward the close of treatment, it should be attributed to the increased transparency of the lens.

THE HISTOLOGY OF THE BLOOD-VESSELS.

BY EDMUND C. WENDT, M. D.,
NEW YORK.

IN man a closed circuit of branching tubes, which proceed from a central organ, the heart, and, ramifying throughout the body, return the blood to this central organ, constitutes the blood-vascular system, as it has been named.

We recognize three different kinds of vessels: arteries, capillaries, and veins. The arteries convey the blood to the various capillary districts, whence it is again collected and carried back to the heart by the veins.

The arteries, highly elastic throughout, are composed of three superimposed layers or tunics. The veins, less elastic, and consequently more flaccid and compressible, likewise consist of three coats or tunics. In both sets of vessels these coats have received the names of *intima* for the inner, *media* for the middle, and *adventitia* for the external layer. The capillaries, intervening between the two, form minute branching tubules, which generally have but a single exceedingly thin and permeable membrane as the sole constituent of their walls.

Of course, all these vessels merge into one another, so that a sharp line of demarkation can nowhere be drawn; but in their typical forms they present clearly defined structural differences, necessitating a separate description of them. We begin with the simplest and yet most important class:

THE CAPILLARY BLOOD-VESSELS.—They are composed, as we have already said, of a single layer of cells, arranged in tubular form, and containing nuclei. These corpuscles are directly continuous, on the one hand, with the inner coat of the terminal arteries, and, on the other, with the intima of the veins, hence also with the lining membrane of the heart. They are called *endothelia*, and, since they constitute the only structural elements which enter into the composition of all blood-vessels, we will first consider them and their relations to these vessels.

The Vascular Endothelium.—Histologists understand by the term *endothelium* a thin layer of flattened cells lining the free surface of various membranes, canals, sheaths, and cavities, all belonging to the serous type. *Epithelium*, on the other hand, is found covering mucous surfaces. All endothelia, in common with the blood, the blood-vessels, and connective tissues, are derived from the *mesoblast*, or middle of the three fundamental layers of the embryo. The epithelia, it will be remembered, originate in the two other layers, called *epiblast* and *hypoblast*, respectively—the former being the superior and the latter the inferior layer of the embryo.

In adult human subjects the vascular endothelia are made up of thin, polygonal, sometimes irregularly pentagonal, flattened cell-plates. Most of the elements are furnished with a rounded or ovoid nucleus, of central or more or less peripheral location. Some have two nuclei. In general, the cells are somewhat elongated in the longitudinal direction of the vessel to which they belong. They also grow slightly narrower as the caliber of the vessel decreases. Their borders are serrated or scolloped, and dovetailed into one another. An albuminoid substance, ordinarily invisible, cements their adjoining edges. This substance has the peculiar property of effecting an energetic reduction of silver nitrate. Hence, by proper management, the outlines of each individual cell may be made visible as a black zigzag surrounding a nucleus. Every cell represents a plate-like expanse of modified protoplasm. Remnants of this original substance may be seen to surround the nuclei of young vessels, where they appear in the shape of varying quantities of distinctly granular matter. Klein has described an *intracellular network*, formed by plexuses of minute fibrils, and associated with a second denser reticulum within the nucleus, called the *intranuclear network*. Whatever interpretation we choose to give these minute structures, the fact of their existence is indisputable. In man, however, their presence is not as readily demonstrable as in animals.

An isolated endothelial cell, when tilted up on its edge, presents the appearance of a straight or curved double contour, with a central thickening corresponding to its nucleus. Viewed *en face*, we observe the sinuous outline and the central or eccentric nucleus, with its surrounding granules of protoplasm. The shape and contour of endothelial cells are subject to considerable variations in the different vascular districts. Moreover, such differences happen in the same district, with the varying degree of expansion or contraction of the particular vessel under observation.

THE CAPILLARIES PROPER.—In point of wideness of distribution, this variety of blood-vessels greatly exceeds all others. Indeed, the capillaries occupy a rank, in this respect, second only to the connective-tissue group of histological structures. As regards importance to the economy, it will only be necessary to advert to the vital processes of nutrition, secretion, respiration, and excretion, to recall the quality and extent of their physiological usefulness. Throughout the body * capillary plexuses are interposed between arteries and veins, which constitute a series of conveying and returning tubes. Thereby the direct continuity of these blood channels is established.

It is in these intermediate territories, and in them only, that the blood serves its true function of giving and taking. True markets of exchange, then, these capillary districts, where the system is supplied with new material, and in return gets rid of useless or even deleterious by-products of tissue-life. Hence the paramount importance of these vessels in the maintenance of life and health. Hence also the direct practical utility of knowing their minute anatomy and physiological dignity. Every practitioner of medicine will see the important relation this branch of histology holds to pathology, and therefore to therapeutics. At the same time we should not forget that the rôle played by the capillaries in the system is normally due to the inherent mechanical and physical properties of a finely elastic animal membrane, rather than to any specific action of their cellular constituents.

---

* HOYER has shown that a direct communication of arterioles with venules occurs normally in the tips of the fingers, the matrix of the nails, the tip of the nose, and various other parts.

Robin, following Henle's example, distinguishes several varieties of these vessels. It seems to me proper to limit the term capillaries to those minute tubules which are entirely devoid of muscular elements. This corresponds to the classification adopted by Virchow, Kölliker, Eberth, Ranvier, Frey, and others. It is the one, therefore, that has generally been accepted, and is both simple and logical.

The diameter of these tubules varies from 0·0045 to 0·0115 mm. Their structure is readily understood. Examined in the living animal with a high power, we see merely a delicate, hyaline, double-contoured membrane, having an average thickness of 1 to 2 micro-millimetres (0·001–0·002 mm.). This membrane forms a tubule, the parietes of which are studded at intervals with rounded or oval nuclei, often containing one or more bright nucleoli. When oval, these nuclei have their long axis parallel with the direction of the vessel. Their average size is 0·0056 to 0·0074 mm. They possess the property of eagerly imbibing most of the staining fluids employed in histology, and of resisting the action of dilute acids, alkalies, and other reagents.

Besides nuclei, the capillary-wall contains at various points peculiar granules, which indicate its protoplasmic nature. In addition, Stricker and Eberth have described lateral processes and pointed prolongations jutting out from the parietes of the capillary tubes. In growing tissue these are readily demonstrable, often forming thread-like connecting bridges between neighboring vessels; at a later period they are hollowed out into true capillaries. The shorter sprouts are also protoplasmic buds, capable of further development into similar vessels. By employing weak solutions of silver nitrate, the capillary-wall may be shown to consist of variously shaped areas, each one corresponding to a nucleated cell. They are the endothelia, and represent, as already stated, the sole essential constituents of all capillaries. Their form varies with the caliber of the vessel, the smaller capillaries being composed of corpuscles which are comparatively narrow, the larger vessels having broader cells. In man they have an average length of 0.0756 to 0·0977 mm., and an average breadth of 0·01 to 0·05 mm. The intercellular boundaries, brought out as dark lines by means of the silver salt, frequently exhibit little nodular swellings.

In addition to the ordinary endothelia, we find smaller areas, generally without nuclei; they have rounded or somewhat dentate contours, and are interposed between the other cells. Eberth believes that some of these *intercalated areas*, as Auerbach has called them, probably correspond to portions of strangulated vascular cells. It is more logical to regard them as the remnants of an incomplete endothelial desquamation, a process which is of physiological occurrence throughout the blood-vessels. These remaining bits are finally destined to become quite detached from the vascular wall, and are then swept away by the rush and flow of the blood-current. The nuclei of such desquamated endothelia appear as free granules in the blood, where they have puzzled many observers, and have been variously called *microcytes*, *hæmatoblasts*, etc. From this description it is plain that Cohnheim's view, that these spaces are openings or stomata, is not sustained. True, we find in serous membranes of certain animals real openings, but these always appear of rounded shape, and are, to say the least, not commonly observed in human blood-vessels. This statement of the case does not militate against Cohnheim's well-known views that the corpuscles emigrate through the vessels, for, remembering the protoplasmic nature of the endothelial tubes, we can readily account for the phenomena in question. The capillary-wall is elastic, extremely thin, and permeable. By virtue of these qualities, it may allow the passage of a leucocyte or colored globule through its substance without suffering a permanent breach of continuity.

The capillary blood-vessels occupy the interstitial connective tissue of organs, without entering their parenchyma proper. Cartilage, the teeth, the hairs and nails, the cornea, and certain structures of the nervous system and organs of special sense are devoid of capillary supply.

Most of the larger tubes are invested by a delicate, external, sheath-like structure, called the *capillary adventitia* or *vascular perithelium.* It is composed of a rather close network of delicate connective-tissue fibrils. Prolongations of peculiar stellate cells, which clasp the capillary tube, may sometimes be seen to join these fibrils. Such branching cells are also encountered at some distance from the capillaries. They show delicate processes, which may anastomose with the offshoots of the adventitial corpuscles. In other places we find only external plates of connective-tissue cells (Krause's *inoblasts*), which have become more or less fused with the capillary-wall. In many instances the perithelium is inseparable from the connective-tissue stroma surrounding the vessel.

In reference to the manner of anastomosis, the forms and modes of ramification of different networks vary with the different tissues and organs of the body. Hence a simple inspection of capillary reticula will generally enable us to decide the nature of the tissue or organ in question. From a physiological point of view, we recognize a causal relation between high capillary development and great functional activity. Therefore, the abundance of capillaries will determine the physiological importance of an organ.

The chief forms of ramification may be grouped as follows: 1. Loops (*a*), simple or compound; e. g., the skin and the hard palate; (*b*) reticulated (the intestinal villi). 2. Tufts (the kidney). 3. Irregularly polygonal networks (the glands and the mucous membranes). 4. Rounded reticula, with round or polygonal meshes (adipose tissue). 5. Reticula with elongated meshes (the muscles, bones, and tendons). There would be a certain satisfaction in knowing that this or that vessel had a precise breadth, and its coat a certain thickness. The precision would be apparent, however, rather than real, because such measurements vary greatly at different times in the same animal, and even more so in different animals. It may be stated, in general, that the caliber corresponds to the size of the largest blood-globules. In man, therefore, we have an average diameter of about 0·007 mm. The largest capillaries exist in the mucous membrane of the stomach and colon, the periosteum and bones, and the pituitary body. The smallest are found in the skin, the small intestine, the lungs, the muscles, the gray substance of the brain, and the retina (Valentin, Weber, and Henle).

THE GENESIS, REPRODUCTION, AND REGENERATION OF CAPILLARIES.—There is still much uncertainty about the mode in which blood-vessels are first formed in the embryo. My personal observations on this subject, while working recently under the supervision of Kölliker, appear to confirm the view held by Foster and Balfour. These authors' account of the interesting process may be summed up as follows: About the second day of incubation in the chick, certain mesoblastic cells send out solid processes, which, uniting, form a protoplasmic network containing nuclei. A majority of the latter acquire a reddish tint, and are ultimately transformed into colored blood-globules. Other nuclei, however, remain unaltered, and, receiving an investment of protoplasm, form walls inclosing the reddened nuclei. The protoplasm of these central nuclei rapidly becomes liquefied, thus forming the blood-plasma. And now we have a system of communicating tubules, containing corpuscles floating in a plasma, their walls consisting of nucleated cells. Hence the blood-vessels do not arise as intercellular spaces, but are hollowed out to form channels in an originally solid reticulum of protoplasm derived from mesoblastic cells.

This explanation of the way in which vessels are formed aids us in understanding both how capillaries are reproduced in the adult, and their regeneration under pathological conditions. The capillary-wall itself, under the influence of favoring circumstances, begins to bud, as it were; the delicate protoplasmic sprouts send out more delicate filaments, which, uniting with similar offshoots from neighboring vessels, establish a connection between two capillaries. In due time these solid structures undergo the familiar process of hollowing out, and the newly formed vessel is complete. Frequently the protoplasmic threads communicate, forming a reticulum which Ranvier has called *vasoformative network.* This author also observed that capillaries develop from special cells, termed *vasoformative cells.* They resemble leucocytes, and form by their prolongations a network of solid protoplasm. This is originally quite independent of already existing capillaries. Subsequently, however, a consolidation is effected, and the blood then flows through these new channels in the usual manner.

The author has been able to trace collections of emigrated leucocytes through various stages of progressive development, culminating in the formation of true capillaries. The experimental investigations on this subject were carried out in Professor v. Rindfleisch's laboratory, and have been fully described by his assistant, Dr. Ziegler, of Würzburg.

THE ARTERIES.—If we follow the capillaries in a direction toward the heart, we soon find the endothelial tube receiving an investment of unstriped muscle-cells. These are wound transversely or obliquely around the capillary, thus forming a second tube, as it were, surrounding the first. External to the muscular layer, there appears some connective tissue, mingling with which elastic elements may be observed. The direction of these additional fibers is mainly longitudinal. They form the third or external coat, called the *adventitia*, the second or middle being represented by the muscle-cells, and the first or internal by the endothelial tube. The latter now receives the name of *intima*. When the layers of its walls are arranged in this simple manner, the vessel is called an *arteriole*, and this constitutes the type of all arteries.

Arterioles, however, commonly contain a few additional fibers between the intima and the media, as the first indication of what afterward becomes a special layer. This structure, known as the *internal elastic coat*, attains considerable development in the larger vessels. With the growth of an artery in caliber, its individual coats are reënforced by additional layers. Hence the thickness of the entire wall increases at the same time that its structure is rendered more complex. But new tissues never appear. Moreover, the increased thickness is not uniformly proportionate to the enlarged caliber; neither does it take place by equal participation of the different tissues mentioned. In vessels of small and medium size, there is a preponderance of muscular over elastic elements. In the larger trunks the reverse condition obtains. It is, therefore, proper to distinguish arteries of the muscular from those of an elastic type. The latter class is represented by the principal distributing trunks, all the remaining arteries belonging to the muscular type. There exist, however, no abrupt lines of demarkation between these main forms—the one merging gradually into the other.

The interposition of the *internal elastic coat* between the intima and the media marks the transition of a minute into a small artery. This new layer consists at first of delicate fibrils of elastic tissue, or an apparently homogeneous membrane. Vascular contraction throws it into folds, which appear as longitudinal striæ or a transverse series of continuous festoons. As the vessel grows larger, this coat gets thicker, becomes distinctly fenestrated, and presents a reticulated appearance. It is now made up of interlacing bundles of connective tissue and elastic fibers, with spaces left between them. The latter constitute the fenestræ of this layer, which in the large vessels becomes a double or triple lamellated membrane. Between it and the lining endothelium there appears still another structure, which has received various names from different authors. Thus, Kölliker has called it the *striated internal coat;* Remak, the *innermost longitudinal fibrous coat;* and Eberth, the *internal fibrous coat.* We shall employ the last term. The *internal fibrous coat* consists at birth of a granular substance, which becomes distinctly fibrillated in the adult. Imbedded in this membrane lie numerous branching corpuscles, containing large, conspicuous nuclei. Besides these cells, smaller, so-called granulation-bodies are frequently seen. So far from regarding them as of pathological origin (Eberth, in "Stricker's Histology"), I prefer to consider them as matrix-cells for the regeneration of desquamated endothelia. My reasons for so doing are as follows: In the blood-vessels of young animals and newly born infants I have frequently noticed thick, dark, and granular bodies immediately below the endothelial lining. These subendothelial cell-plates were smaller and more polyhedral than ordinary endothelia, and invariably contained one or even two nuclei. They appeared to resemble germinating endothelial cells, such as Klein has described as occurring in serous membranes. They did not, however, occur in single layers, as Klein has seen them, but in strata. They were observed in particular vessels of young animals. It seems likely that these cells disappear or shrivel with the growth of the individual, but their sudden reappearance in pathological processes leads the author to believe that at least some of them persist through life. Talma (Virchow's "Arch.," vol. lxxvii, pp. 242–269) observed similar elements, but thinks they are derived from the ordinary endothelia, instead of vice versa. He is also convinced that the latter are merely modified leucocytes; but this view has been shown to be erroneous by Virchow ("Arch. f. path. Anat.," vol. lxxvii, pp. 380–383). Endothelial desquamation is probably, as already stated, a physiological process of constant occurrence, and analogous to the epithelial shedding from the surface of the skin and mucous membranes.

The *media*, *musculosa*, or middle coat, consists of superimposed layers of smooth muscle-elements disposed in groups. Most of them lie transversely to the course of the vessel. The intervals between neighboring groups are occupied by connective tissue and elastic fibers, arranged in networks. This interstitial substance becomes augmented with the increasing caliber of the artery. In the largest trunks it all but replaces the muscle-cells. Here, however, the elastic fibers also reach their maximum development, encroaching upon the connective-tissue elements until the latter become quite inconspicuous. Besides its principal transverse layer, the media also contains fusiform muscle-cells, placed in an oblique or longitudinal direction. They are scattered irregularly throughout the middle coat. Sometimes the intima and the adventitia also contain sparsely distributed muscle-cells. The arterial muscular coat is distinctly separated from the intima by the interposition of the internal elastic coat. Externally, a sharp boundary is formed either by the adventitia or by the *external elastic coat*. The latter appears as a separate membrane in arteries of small and medium size. There are, however, exceptions to this rule. The external elastic coat consists of a close network of delicate elastic fibrils anastomosing with similar adventitial reticula. The *adventitia* is composed of interlacing bundles of connective tissue, commingled with elastic lamellæ of varying thickness.

THE VEINS.—From their origin in the capillaries to the point where they enter the trunk proper, the veins preserve throughout a uniform type of structure. But no sooner have they penetrated into the visceral cavities of the body than we find them undergoing considerable alterations, which may either increase or diminish the complexity of their structure (Ranvier). The veins are far more numerous than the arteries. They are also, as a rule, wider and more dilatable, and have thinner coats. It is owing to the latter peculiarity that the color of the blood is seen through their semi-translucent walls. Finally, they branch more frequently than the arteries. Three main coats or tunics enter into the composition of most veins. These resemble the corresponding arterial structures, and have likewise received the names of *intima*, for the internal endothelial lining; *media*, for the middle muscular; and *adventitia*, for the external connective-tissue coat.

Veins, however, differ from arteries in the feebler development of their muscular coat, in the comparative paucity of elastic elements, a greater laxity of their intima, and the presence of valves in some.

We may distinguish veins of small caliber, or *venules*, from the vessels of medium and large size. The venules, like the arterioles, in certain respects resemble the capillaries. As it may become important to differentiate the minuter forms of vessels, we will here briefly indicate the main points of distinction between full-sized capillaries, small veins, and arterioles. In the latter, the endothelial cells are more nearly fusiform, longer, and somewhat narrower than in the venules. In the capillaries, their form and dimensions hold an intermediate position between the arterial and venous types. The middle coat is entirely wanting in capillaries, and is much less conspicuous in the small veins than in the arterioles. In fact, under ordinary circumstances the muscle-coat forms by far the most characteristic distinguishing feature between these vessels. Venules quite frequently have only a few sparsely scattered muscle-cells, in place of the continuous muscular layer which exists in minute arteries. The former also are either altogether deficient in the internal elastic coat, or the presence of this structure is barely indicated by delicate elastic fibers; these latter usually have a longitudinal direction. On the other hand, arteries of corresponding caliber are mostly furnished with a distinct elastic inner coat. Finally, with regard to the adventitia, we find it more highly developed proportionally in venous than in arterial vessels, whereas capillaries commonly have only a few faint fibers to denote the presence, in them also, of this coat.

The *internal elastic coat* of the larger and largest veins is very feebly developed in comparison with that of the arteries. Distinct fenestrated membranes are scarcely ever encountered. Veins are likewise possessed of an *internal fibrous layer*, but here again we observe that comparatively feeble development of a coat which in the arteries is quite conspicuous.

Among the many special characteristics of the various veins in different regions, we will only mention the following: The jugular veins show well-marked elastic reticula, the meshes of which contain sparse muscular elements. In the femoral, brachial, and subcutaneous branches there is a media of considerable dimensions. The inferior vena cava has, in addition to a transverse layer of muscle-cells, a longitudinal one of greater thickness, and, besides these, contains muscle-cells which are scattered through its elastic coat. The veins of the meninges of the encephalon and cord, the retina, the bones, and the muscles, and the jugular, the subclavian, the innominate, and the thoracic portion of the vena cava are all entirely devoid of a true muscular coat. The veins of the gravid uterus have only longitudinal muscle-elements. In addition to an outer longitudinal layer, the vena cava, the azygos, the renal, the hepatic, the internal spermatic, and the axillary veins possess an inner circular layer. The iliac, the femoral, the popliteal, and several other veins contain a middle coat of transverse muscle-cells, between internal and external longitudinal layers.

The *valves* of the veins consist of longitudinal bundles of connective tissue commingled with scanty elastic fibrils, and containing nucleated cells. The inner endothelial layer appears to be a direct continuation of the intima of the vein. That portion of the subendothelial tissue which does not face the blood current is less developed than the part turned toward it; the elastic fibers of the latter are also barely visible. The attached valvular border frequently presents transversely disposed muscle-elements. Eberth has denied their occurrence, but they have been repeatedly observed by Ranvier and other competent histologists.

PECULIAR VASCULAR STRUCTURES.—The following structures are remarkable for the conspicuous and characteristic development of their blood-vessels: *vascular membranes, tunicæ vasculosæ*, such as the pia mater of the brain and spinal cord, and the choroid coat of the eye. In these we find that the excessive vascularity is intended to nourish, not the membranes themselves, but the organs which they invest. *Blood-vascular glands, vascular plexuses.*—In man, two bodies of peculiar structure represent this group. They are the *coccygeal gland* of Luschka, and a rudimentary organ called the *intercarotid gland.* Both consist essentially of convoluted blood-vessels and nerves, imbedded in a nucleated connective-tissue stroma. The *coccygeal gland* is a small, rounded, pinkish body, of rather firm consistence, and is connected by a pedicle with the middle sacral artery. This pedicle contains blood-vessels and nerves. The arteries entering the gland-like body become convoluted, and show numerous tubular, fusiform, or ampullar dilatations. Sometimes they have terminal sacculi, closely resembling minute aneurisms, and giving the organ its glandular appearance. Indeed, Luschka has called them gland-tubules and vesicles. After death they are commonly found to be empty, but by proper management their natural injection with blood is readily obtained. Both capillaries and veins also present lateral varicosities, studding them in great number. All these vessels have the usual endothelial lining. External to this, there appear aggregations of rounded or polygonal cells. They are furnished with nuclei, and receive an investment corresponding to the vascular adventitia, but containing comparatively more nuclei than that structure.

The *intercarotid gland* differs from the coccygeal in its larger size, and because it contains accumulations of ganglionic nerve-cells. These are derived from the carotid plexus. Here the vascular sacculi also more nearly resemble dilated capillaries, whereas in the other body they approach the arterial type. In all other respects the structure of these vascular plexuses is identical. Some authors regard the spleen and the supra-renal capsule as belonging to this group of blood-vascular glands. The author sees no necessity for so considering them, and the subject may therefore be dismissed without further comment.

Corpora cavernosa.—They consist in great part of dilated blood-vessels, chiefly of the venous type. These intercommunicate very freely, and when filled with blood cause the organ to assume the peculiar condition known as *erection.* The penis and the clitoris are supplied with cavernous bodies. The urethra of the female and the vestibule also contain them. Interlacing bundles of muscle-fibers, together with similar bands of connective tissue, form a scaffolding for the support of the vascular structures mentioned. The latter present the ordinary endothelial lining.

Several years ago Dr. H. J. Bigelow succeeded in demonstrating the existence of cavernous tissue in the nasal fossæ. In a letter to the author, Dr. Bigelow states that his point was, "the demonstration of an abundant and true cavernous structure and erectile tissue on and about the turbinated bones, occupying the place of what had been previously supposed to be only venous sinuses, the *loops* of Kohlrausch. The new result obtained was due to a different mode of preparation. Kohlrausch injected from the jugular vein; I [Dr. Bigelow] inflated the tissue locally, as if it were in the penis."

VASA VASORUM, LYMPHATICS, AND NERVES.—*Nutrient vessels* are found in the walls of all the larger arteries and veins, where they occupy the adventitia. Sometimes they are seen to dip down into the outermost portions of the media. *Lymphatics* occur as clefts or spaces between the various tissues of all arterial and venous trunks. Some vessels are ensheathed by a lymphatic membrane, which is sometimes furnished with a lining endothelium. Such structures are called *perivascular*, or, better, *circumvascular*, *spaces.* They may be found in connection with the omental and the mesenteric vessels, also the splenic and the hepatic arteries, as well as certain meningeal vessels of the brain and cord.

NERVE-FIBERS are seen to pass to many of the blood-vessels.

They enter the adventitia, and at its internal boundary suddenly appear to divide into numerous filaments, the ultimate distribution of which has not hitherto been satisfactorily ascertained. They seem to terminate in the muscle-cells of the media. Beale considers the presence of ganglion-cells in the vascular nerves as of constant occurrence. The author can not admit the truth of this general statement, having discovered such cells in only exceptional instances. There is no discernible difference of structure between the vaso-constrictor and the vaso-dilator nerve-fibers.

THE TREATMENT OF WHOOPING-COUGH WITH ATROPIA USED HYPODERMICALLY AND CARBOLIC-ACID INHALATIONS.

By WILLIAM LEE, M. D.,
LATE PHYSICIAN TO THE BALTIMORE GENERAL DISPENSARY.

In August, 1879, having under my care a number of cases of whooping-cough, in some of which the paroxysms were unusually severe, I determined to try this plan of treatment, which, in part, I had shortly before seen highly recommended in "The Lancet" and in "The London Medical Record"—the difference being, that I used the atropia hypodermically, instead of giving it by the mouth, as recommended in "The Lancet." I did so because of my great faith in hypodermic medication; because the dose of atropia, which is unvarying in its strength, is easily regulated; and because the result of all investigation in regard to its action shows not only that cutaneous sensibility is rapidly lowered by it, but that at the same time an anæsthetic effect is produced upon the afferent branches of nerves which originate spasms.

Each minim of the solution used contained $\frac{1}{120}$ of a grain of atropia. I injected one minim or more, according to the patient's age, with 10 minims of water, always using it as early in the morning as possible, and repeating it at night if occasion required. The carbolic-acid solution, of the strength of five per cent., made with the very best crystals, was used as follows: five strips of Canton flannel, three inches wide and five inches long, were saturated with this solution, and hung around the patient's bed and about the room at bedtime, and they were moistened with the solution once again during the night.

The result of the treatment in these cases justifies the belief, I think, that with it we may expect a steady diminution in the number and the duration of the paroxysms, a change in the character of the whoop, and a cure of the disease in a much shorter time than has been accomplished by any other means. Out of several cases successfully treated in this way, I report two in detail:

Case I.—Mary S——, three years old, first seen August 1st, had well-developed whooping-cough. The mother stated that she had whooped fifteen times daily for the previous three days. She had particularly noticed each one because of their being so severe. One minim of the atropia solution was injected, and the carbolic acid was used at bedtime. *August 2d.*—Since the last note she has had ten paroxysms, those at night having been less severe. *3d.*—There have been six paroxysms since the last visit—one, at night, having been very severe. *4th.*—Six paroxysms have occurred, two of them very severe. The nurse had neglected the inhalations. *5th.*—There have been four paroxysms, of short duration. *6th.*—Three paroxysms, of very slight severity, have occurred. *7th.*—But one paroxysm has occurred; very severe, however. *8th.*—There have been no more paroxysms. She is very thirsty. The treatment, which had consisted of the daily repetition of that mentioned in the first note, was now suspended. *9th.*—There have been two paroxysms. Treatment renewed. *10th.*—She has had no paroxysms, and has coughed but little. At the end of three days more she had entirely recovered.

Case II.—John K——, five years old, was first seen August 14th, at night. The mother said that he had been sick for some time, and that, as well as she could remember, he had had twelve paroxysms daily for two days previously. The atropia and carbolic-acid treatment was begun at once. *15th.*—Ten paroxysms have occurred. *16th.*—There have been nine paroxysms—so severe that a second injection had to be given. *17th.*—He has had six paroxysms, much less severe. *18th.*—There have been four paroxysms—one, at night, having been very severe. The use of the carbolic acid had been neglected. *19th.*—Three paroxysms have occurred, shorter and milder. *20th.*—One paroxysm. *21st.*—He has had four paroxysms. He seems to have taken cold, and has high fever. The breathing is very short, but no pulmonary complication is discovered. The injection was omitted, but the use of carbolic acid was continued, and he was ordered small doses of spiritus mindereri. *22d.*—There is no longer any fever. The paroxysms have been six in number, but they have not been so severe as before. The injections were resumed, and the spiritus mindereri was discontinued. *23d.*—Three very mild paroxysms have occurred. *24th.*—One paroxysm. *25th.*—No further paroxysms have occurred. The treatment was now stopped, and in four days he was well.

A few words as to the *modus operandi* of the treatment. Whooping-cough is a neurosis, and, to judge from the sensations described to us by those who are old enough to analyze their feelings, it is the laryngeal branches of the pneumogastric nerve that are primarily affected. The result of this affection is that at intervals a series of reflex phenomena present themselves, varying in duration and intensity, which involve nearly all the branches of the pneumogastric. The frequency of the paroxysms is, however, no index to their severity, and conversely; nevertheless, their frequency and intensity may be, and often are, coincident. Is there any explanation of this? I think so. No one who has much to do with the ailments of children can fail to observe what very different effects are produced in them by apparently the very same irritant. In one, convulsive movements, fever, restlessness, etc., are excited; while in another, and perhaps of the same family, scarcely any systemic disturbance is the result. This is probably due to the inherent susceptibility of some children to "sympathetic" action and reflex phenomena; and, as nervous exaltation, or "nerve-tension," is far higher in children than in adults, we find in them, as a rule, a greater severity of the paroxysms of disease than is met with in adult life, and, according to idiosyncrasy, greater severity and greater consequent prostration in some children than in others.

Concerning reflex phenomena, Schroeder van der Kolk has shown that the medulla oblongata is the principal center whence the more general reflex movements derive their origin, it having a special capacity for exciting them; but in consequence of augmented irritation this capacity is greatly increased, and it will sometimes rise so high that reflex phenomena will manifest themselves spontaneously without further eccentric irritation. We can therefore understand how the peculiar irritation (which is probably excited at the periphery of the nerves which supply the larynx and trachea), having been transmitted to the medulla oblongata, calls forth those reflex actions which in their entirety constitute the phenomena of whooping-cough; and, further, if this irritation is constantly propagated, either through the action of a morbidly excited sympathetic nerve or from idiosyncrasy, the medulla oblongata may at length become so sensitive, of such exalted capacity, that severe reflex phenomena, even to the extent of convulsive action, may spontaneously arise. It is probable that in all cases of whooping-cough the degree of excitability capable of being produced in the medulla oblongata is the explanation of the various degrees of intensity in the reflex phenomena which we are so frequently called upon to witness; or, in other words, the intensity and frequency of the paroxysms of whooping-cough are in direct ratio to the amount of excitability to which the medulla oblongata is inherently liable.

Hence the treatment of whooping-cough should be directed primarily to diminishing this capacity for reflex excitability, either eccentric or centric. Of all drugs there are none that have such a peculiar and special effect upon the pneumogastric nerve as belladonna, though its action is by no means limited to that nerve. It is essentially a nervine sedative, and has the property of diminishing both sensibility and irritability when these are morbidly increased. Its primary effects are manifested upon the mouth and throat, producing thirst. A further action is upon the laryngeal muscles, rendering articulation imperfect, or preventing it altogether; also upon the constrictors of the pharynx, so that deglutition becomes difficult or impossible. These and other effects are produced in greater or less degree according to the amount taken. It is reasonable, then, to attribute the beneficial effects of atropia in whooping-cough chiefly to its action upon the laryngeal branches of the pneumogastric nerve, diminishing the exalted sensibility and irritation which are known to exist, and which, by constant propagation to the medulla oblongata, increase in that body the capacity for reflex phenomena. But it is also probable that atropia has a very decided effect upon the medulla oblongata itself, rendering it less capable of exciting reflex action. Dr. Kroon's experiments led him to the conclusion that valerianate of atropia had a very special and direct effect upon it, diminishing its inherent capacity for reflex phenomena. The almost specific effect of belladonna in preventing nocturnal seminal emissions is also probably due to this action. I think, then, the conclusion is justified that, by its action upon the pneumogastric and sympathetic nerves and also upon the medulla oblongata, atropia relieves and ultimately cures the neurosis called whooping-cough; and that, in just those cases where, from idiosyncrasy or easily excited sympathetic action, the intensity and frequency of the seizures are greatest, its beneficial action will be most marked.

So much has been written about carbolic acid that I shall not attempt to explain the particular action it is supposed to exert in these cases. Suffice it to say that, as a result of my experience, I am satisfied that it not only acts as a direct disinfectant and purifier of the air breathed in these cases, but will also be found of service, used in the same way, even in other forms of cough.

TWO CASES OF PARALYTIC AFFECTIONS IN CHILDREN; WITH REMARKS.

BY EDWARD H. BRADFORD, M. D.,
SURGEON TO THE CHILDREN'S HOSPITAL, BOSTON.

CASE I.—*Deformity with Rigid Muscles* (ADAMS)—*the* "*spastische Spinallähmung bei kleinen Kindern*" *of* ERB.—J., aged ten years, a healthy and intelligent girl, was referred to me by the kindness of Dr. Buckminster Brown. She was said to have been lame since she began to walk, but no cause had been ascertained for the lameness. The child was well developed, and had had no sickness.

In walking she threw her knees in, as in knock-knee, with the left foot in a position of talipes equinus and slight varus. In hurried motion, she walked on the toes of both feet, but otherwise this was noticeable only on the left side. If she stood, the left heel could be forced to the floor, with the sole of the foot perfectly flat; but the distortion returned immediately. In the recumbent posture the left foot could not be flexed voluntarily, but remained held firmly in a position of equino-varus, with the heel drawn up two inches above the ball of the foot. After the steady use of force for a few moments, the foot could be pushed to a right angle with the leg, but immediately resumed its former position. Motion at the right ankle was normal, and the child could flex and extend the right foot voluntarily.

Any attempt to abduct the thighs met with firm resistance. Neither thigh could be voluntarily abducted. Flexion of the thighs was normal. The lower extremities were held in the axis of the body when the patient was lying down, but, when standing, the thighs were adducted—the left one more so than the right. The skin of both legs was mottled, and the circulation was feebler than normal. Pallor caused by pressure with the finger disappeared slowly. There was, however, no atrophy, coldness of the skin, or loss of sensation. On palpation, the limbs below the knee felt hard, like contracted muscles. The upper extremities were in every way normal. The bladder and rectum were not affected. Dr. J. J. Putnam, who was kind enough to examine the patient, found the tendon reflex at the knee slightly increased. There was no hyperæsthesia of the skin. The electrical reaction was not examined.

During the course of the treatment the child was etherized, and, though the rest of the muscular system was completely relaxed, the muscles of the legs and the adductors of the thighs remained unrelaxed; but their resistance yielded more readily to force than before the anæsthetic was used. Convulsive twitching of the muscles of both legs was seen when the other limbs were completely relaxed, and also in the collapse which just preceded and followed vomiting.

In attempting treatment of the case, the object aimed at was, to enable the child to walk without deformity or lameness. The chief causes of the irregular gait were the contraction of the adductors and extensors of the left foot. Various attempts were made, without success, to overcome the spasm of these muscles. Among others was the application of a plaster-of-Paris bandage to the left foot while the patient was anæsthetized and the foot forced into a position at right angles with the leg. On removing the bandage after it had been worn ten days, no improvement was found in the flexibility of the foot, or in the position assumed by it. Tenotomy was not done, as the difficulty appeared to be due to a spasmodic condition of the muscles, and not to a want of length of the tendo Achillis.

As it was found that, if the left foot was held in proper position while the child was standing, her weight was sufficient to force the heel to the floor, an apparatus was made to hold the foot in position and to prevent adduction of the thighs in walking. To a well-fitting pair of laced boots, steel uprights were fastened (one on the outer side of each boot). These were made long enough to extend from the sole to the thigh. To allow of bending the knee and ankle, the uprights were jointed at those points and secured with loose rivets. A strap around the calf secured the apparatus to the limb, and a strap (with slight elasticity) was fastened on the outside of the left boot, and buckled into the steel upright. The latter, according to the suggestion of Dr. Morton ("Surgical Report, Pennsylvania Hospital"), was hinged at the ankle so as to allow of motion outward, but not inward. With the boot well applied to the foot, and the strap tightly buckled (after the foot had been forced into as near the required position as possible), it was impossible for the deformity of equinovarus to be assumed. The steel uprights were fastened at the top to a pelvic band, and were twisted so that the feet were thrown outward when they were well laced in the shoes, and when the pelvic band was well applied. It then became impossible for the child to throw her feet inward or to adduct the knees.

When the apparatus was first applied, some difficulty was met with in teaching the child to walk; but at present she is able to walk without discomfort and without any evidence of deformity, but with some awkwardness. If the apparatus is removed, the lameness returns.

During the treatment the child was kept in bed for a week, and constant traction was made upon the adductors of the thigh by buckling around each thigh, just above the knee, a strap which hung over the side of the bed and sustained a five-pound weight. This was sufficient, after a day or two, to overcome the resistance of the adductors; and after removing the weights there was less rigidity for a while. The gain, however, was temporary.

The case here reported appears to belong to the class of spasmodic spinal paralyses of infancy called to our notice by Erb (Virchow's "Archiv," Bd. lxx) and lately by Hamilton (Prize Essay, "Trans. Am. Med. Assoc.," 1879). Mr. Adams ("Club-Foot," Case IV) mentions a patient suffering from "deformity with rigid muscles," which is probably the same disease. The pathology of the affection, however, was not well understood at that time. Verneuil (" Gaz. des Hôpitaux," July, 1877, p. 694) describes a bilateral contraction of the adductors of the thigh which, from this description, would appear to be a similar disease. In one of Mr. Adams's cases some improvement was gained by tenotomy in the case of an adult, who had been treated for some time unsuccessfully by a quack who employed constant extension by means of weights.

As the pathology is now understood, the affection is due to a congenital deficiency or degeneration in the lateral columns of the cord, and a cure is of course out of the question. In the patient mentioned here, the affection was not present in an aggravated form. The result of four months' treatment was such that a child who was a manifest cripple became by the use of proper apparatus able to walk with much less discomfort and without deformity. It seems possible also that, if the same method of treatment be carried out thoroughly for a long time, during the child's growth, there may be a trained muscular adaptation, which in time will enable her to go about without apparatus and without much apparent deformity, as is occasionally to be seen in cases of ordinary infantile paralysis treated thoroughly in this way. An effect of this sort was illustrated in the following case.

CASE II.—*The Effect of Training upon a Paretic Condition of the Muscles.*—J. C., a well-grown boy, fourteen years old, was referred to me by Dr. C. F. Taylor, of New York. The patient was afflicted with a severe impediment in his speech and a useless condition of the right arm and hand. He seemed to be intelligent, though rather childish for his years; but, by reason of his defect in speech, he was completely isolated from companions, except in his own family. No cause for the trouble could be ascertained; it had apparently developed in infancy. In every other respect the boy enjoyed perfect health. The right arm and hand were smaller than the left. There was no loss of sensation. The skin was mottled. Loss of the power of motion was not complete, but movements of the hand were made with such difficulty and feebleness that the hand was practically useless. He could not comb his hair or use a knife for his food. A similar state was found in the tongue. Movements of the tip of the tongue were executed with difficulty. It could not be raised to the roof of the mouth, and, if protruded, could not be moved in any direction except slowly and with tremor. The sounds of the letters *i*, *l*, and *r*, and of combinations of consonants could not be pronounced. When excited, the boy was practically speechless, as control of the tongue was almost lost.

He was placed in charge of a lady who had been a teacher of visible speech in a school for the deaf and dumb. The treatment consisted in persistent drill in correct pronunciation, without intermission. The boy was removed from his family, and lived with his teacher. I had an opportunity of seeing him after a year's tuition. In this time not only had there been a great improvement in the speech, but his hand and arm, which previously were of little use, had been so trained that he could use his right arm and hand at his meals, and had learned to write quite fairly.

◆

Editorials.

INTRA-UTERINE MEDICATION.

The many discussions which have lately taken place, both in this country and elsewhere, upon the subject of intra-uterine medication, show a wide divergence, both in views as to uterine pathology and in methods of practice, on the part of those whom we all recognize as possessing the capacity and the opportunities necessary to settle the questions at issue, were they susceptible of solution by clinical observation alone. When we find one gynæcologist making daily use of the curette; another frequently applying nitric acid to the interior of the uterus; another pinning his faith upon this or that medicament, in the form of a solid cylinder, to be left within the uterus for a space of time; another insisting upon the frequent necessity of slitting up the cervix as an accessory measure; another calling attention repeatedly to a particular combination of two drugs that had before been very widely used alone as applications to the endometrium; another looking with distrust upon any other than the milder applications; and still another, who doubtless meets with his fair measure of success in practice, declaring that nothing short of serious implication of the general health warrants a resort to intra-uterine applications—all this means, so far as we are able to make out, not only that what we call endometritis is not a simple disease, showing a fair degree of uniformity in its symptoms and in its results (for that such is not the case it requires but very little experience to show), but that the various morbid conditions included under the name are to a great extent beyond our power to distinguish in actual practice.

Time was when a diagnosis of "leucorrhœa" was thought sufficiently specific; and we have even now advanced little further than to draw a distinction between a vaginal and a uterine affection, for, although such terms as hæmorrhagic endometritis, granular endometritis, etc., are in common use, still (as Dr. Playfair intimated in opening the discussion in the Section of Obstetric Medicine of the British Medical Association about a year ago), the state of our pathological knowledge hardly justifies such expressions of precision. To establish the relations which the different morbid conditions of the uterine mucous membrane doubtless hold with accompanying (and perhaps causative) lesions on the one hand, and with symptoms on the other hand, is what we need to enable us to determine when to employ intra-uterine treatment and when to abstain from it, or, having settled upon its use, when to apply the curette, when to resort to caustics, and so on, as well as what preliminary, accessory, or complementary measures to make use of at the same time.

For pathological anatomy to furnish us with these desiderata will be the work of many years to come, since, in the few necropsies that include a searching investigation of the uterus, it is but seldom that the condition of the subject during life is noted or even known. Meantime we may perhaps do something better than merely to grope along, as in the past, curing some patients and damaging others—waiting for an accumulation of results to set us finally on the right path. It may be well to draw upon analogy—that, for example, between the skin and the mucous membranes—to ask ourselves if it be really the endometrium alone that is at fault in rebellious cases of uterine catarrh, or if there be not some morbid condition of the underlying tissue to keep up the mischief, as a deep-seated infiltration or an impeded state of the circulation keeps up an eczema. Analogy is surely better than no guide at all—used, we scarcely need say, under the control of clinical investigation. It is in some such way, we are convinced, that we must proceed, if we are to arrive within a reasonable length of time at a knowledge of the pathology of endometritis.

THE annual meetings of the American Medical Association seem to be looked upon, by the greater number of those who resort to them, rather as serving to bring the profession throughout the country into a closer knowledge of itself—of its *personnel*—than as the proper occasion for a great amount of scientific work. At all events, we seldom find the latter accomplished. Certainly it was not at the meeting in New York last month, although we have reason to believe that, so far as the former consideration was concerned, the gathering was all that could be looked for. The attendance was very large, and those present included representatives of the better portion of the profession in all parts of the country.

THE American Association of Medical Editors showed its wisdom by declining, at its annual meeting in June, to transact any legislative business. In voluntary associations such work is always hazardous, and it would be doubly so in one so loosely made up as this one is. It seems to us that the chief, if not the only legitimate, function of such an organization consists in the consideration of plans and suggestions as to the proper manner of conducting a medical journal. There would seem to be ample room for work in this sphere, and yet nothing of the sort was done, so far as we are aware.

THE Association is to be specially congratulated upon the coolness with which it treated a proposition that had lain over from the previous meeting—a proposition looking to nothing less than a rule compelling every journal represented to exchange with all others, on pain of being "reported," and, we presume, bringing down upon itself unknown phials of wrath! The meeting also had the good taste to elect Dr. Shrady president, and to him we look to give the next annual meeting a practical cast.

Reviews and Literary Notes.

The Venereal Diseases, including Stricture of the Male Urethra. By E. L. KEYES, A. M., M. D., etc. New York: William Wood & Co., 1880. [Wood's Library of Standard Medical Authors.] Pp. xiii-348.

THE work on venereal diseases by Dr. Keyes forms a most valuable number in the very estimable series of works to which it belongs. At the present day, to secure a place worth noticing among the host of good books on venereal requires no mean standard of excellence. Though Dr. Keyes's book neither assumes to have, nor can claim, great originality in its matter, yet it commends itself by reason of its thoughtful, earnest, and conscientious manner. It evinces a mastery of the subject, gained by careful study and well-garnered experience, and there is manifestly a disposition to appeal to the personal experience or common sense of the reader rather than to his veneration of authority, or to the craving for what is new and strange. The style is clear, unaffected, and forcible.

We have been especially pleased with the manner in which the subject of treatment is presented. Directions are given with an explicitness and a degree of confidence which convince one that the writer is speaking whereof he knows. His methods may, very likely, be no better than some others, but evidently they are methods that have been carefully planned, and have been tested in the writer's own experience. Furthermore, they will generally commend themselves to the reader as rational and practical. Far more satisfactory is this than the long array of remedies culled from all sources and authorities, with which too many authors cumber their text. The aim of the writer has not been to furnish a compendium of venereal practice, but a practical treatise, and we think that the method he has adopted shows wisdom and good taste.

With regard to the nosological position of chancroid, the author holds very decided views. Of late there has been a growing tendency to regard chancroid as a simple inflammatory affection. It has been supposed that any pus may, through irritation, acquire virulent properties, and, whenever inoculated, will produce a sore precisely identical in appearance and character with the typical venereal soft sore. This theory succeeded the doctrine of Clerc, which regarded chancroid as the product of the syphilitic poison, modified by re-inoculation upon an already syphilitic subject. Under such circumstances the result is not the indurated chancre of syphilis, but an ulcer in every way similar to the contagious non-infecting venereal sore. But more recent investigations have shown that this ulcer owes its origin not to the syphilitic virus, but to the pus contained in the inoculated secretion, and its ready inoculability upon the syphilitic subject has been supposed to be due to the increased vulnerability of syphilitic tissues or to their peculiar "pyogenic" condition. The more these investigations were pursued, the more the question arose, whether chancroid had any specific character at all; whether under favorable conditions it might not be produced *de novo*. Such a view the writer strenuously opposes. Chancroid, he believes, is as genuine, as independent, as specific a disease, as is vaccinia or even syphilis. The ulcers produced by the inoculation of indifferent (not chancroidal) pus are not identical, he contends, with the virulent, typical venereal sore. "No one," he says, "has shown that the minute pricks of a pin dipped in such" (not chancroidal) "pus will produce an ulcer yielding a chancroidal bubo—the virulent, not the simple suppurating bubo. No one has produced a typical chancroidal ulcer by inoculating from a half-glass of water in which one drop of simple inflammatory pus had been placed—as did Puche with a drop of chancroidal pus." In support of his position he refers to cases and to the results of experimental inoculations both by himself and by others, but for these we must refer the reader to the book. The point is not easily settled; and, really, it makes but little difference as regards either diagnosis or treatment, whether the chancroid derives its virulence from a long succession of chancroids, one propagated from another—a lineage as ancient, perhaps, as that of syphilis itself; whether there be a single virus for both chancre and chancroid, or whether there be poisons as numerous as the stings of insects, all capable of producing sores clinically indistinguishable from one another; or, finally, whether the virulence be an accidental and ephemeral quality, which is generated spontaneously. The author's views concerning chancroid are consistent with his position in regard to gonorrhœa. While he admits a simple urethritis, he claims that true, typical gonorrhœa is a specific disease, and can originate only from its kind. He claims that it has a veritable period of incubation, differing in this respect from those writers who follow Ricord, and deny that gonorrhœa can have a period of incubation any more than a simple catarrhal inflammation can. It has somewhat surprised us that, in connection with this subject, Dr. Keyes has not availed himself of the cogent argument employed by Milton and others, which relates to the freedom of country places from gonorrhœa so long as it is not directly imported from the large cities.

With regard to true chancre, the writer evidently believes that it is not the starting-point of the general infection, but simply the first manifest symptom of the disease, the infection having occurred during the first incubation. Naturally, therefore, he has little faith in the alleged abortion of syphilis by means of excision of the initial lesion. Auspitz's cases bearing upon this point are rather severely criticised. The writer claims that the fact of the experimenter being a unicist furnishes presumptive evidence against the correctness of his diagnosis. He objects also that the diagnosis was based solely upon the presence of the "initial sclerosis," while confrontation was neglected. Moreover, he claims that the cases were not sufficiently long under observation after excision. Nevertheless, these experiments are not pursued without difficulty. It is far easier to criticise them than to controvert them by means of counter-experiments.

Under the head of transmission of syphilis by inheritance, the writer discusses at some length the vexed question as to whether *a syphilitic father can transmit the disease to the offspring, the mother remaining healthy.* A very guarded opinion is expressed, which, however, seems to incline to the negative. The points which he thinks most strongly militate against the proposition that a healthy mother can bear a syphilitic child are: first, the absence of any testimony that such a woman ever afterward contracted the disease; and, second, Colles's law, that a syphilitic child of an apparently healthy mother never infects the mother, though others (a strange nurse, for example) may be infected. The following is Dr. Keyes's conclusion: "When the father is diseased and the mother healthy, the child is healthy, as a rule. Sometimes the child is diseased under these circumstances, while the mother *seems* to be, and continues to remain, well in all respects, as testified to by a number of perfectly competent observers." A very cautious statement.

In giving the treatment of syphilis, the author advances an unusually systematic method of administering mercury. His preference appears to be for the protiodide. He begins with a sixth of a grain three times a day. The dose is increased by an additional sixth of a grain every fourth day, till what he terms the "full dose" is reached, which is indicated by some slight irritation, usually of the gums or of the intestinal canal. The full dose is continued so long as energetic treatment is required, after which a "tonic dose" (arbitrarily fixed as one half to one third of the full dose) is continued without interruption for from two to three years. Whenever an emergency arises requiring it, a return is made to the full dose. But little is said of the inunction plan. He recommends using only the flexures of the joints, which are particularly prone to show signs of irritation, and advises a twenty-per-cent. solution of oleate of mercury. Mention is made of the hot springs of Arkansas, but he denies that they possess any specific virtues, and believes they are of use only in the cases of broken-down cachectic patients, when their tonic properties, he thinks, may be of some avail.

With respect to the writer's treatment of gonorrhœa, we note that among the balsamic remedies he gives the preference to oil of sandalwood. Of cubebs he says but little, and evidently is suspicious of it. He makes the rather extraordinary statement that when the discharge is on the decline "copaiba generally ceases to be very useful, and has to give place to cubebs." This ill accords with what others have written of these remedies. The good effects of cubebs have been found to exhibit themselves *par excellence* in the acute stage, while most writers agree in reserving copaiba for the declining stage of the disease. Diday, for example, expresses himself most positively in this regard.

The portion of the book devoted to stricture is interesting mainly for its observations on spasm of the urethra, and the treatment of stricture of large caliber in the pendulous portion. The author's dissent from the views promulgated by Dr. Otis in this connection is expressed very clearly and emphatically. "I have tested the new method," he says, "quite extensively, and find myself inclined by experience to be more and more conservative, and to cut less and less within the urethra anywhere beyond the first three quarters of an inch from the meatus, except in desperate cases, believing that such cutting, on the whole, does more harm than good in a majority of instances. . . . I do not by any means condemn this operation, which I think an excellent one, and indispensable to the cure of some cases; but, what I do feel called upon to condemn is, the extensive indiscriminate cutting of the anterior urethra now commonly indulged in, especially by young surgeons, for any and all possible morbid conditions of the urethra, simply because the canal is smaller in some parts than it is in others, as the Almighty evidently intended that it should be."

For the treatment of tight strictures, Thompson's divulsor, tunneled, is spoken of favorably; to avoid catching the mucous membrane in closing the instrument, which forms one of the most serious objections to its use, he advises that it be gradually pushed into the bladder while it is being closed. It is noticeable in this connection that no mention is made of Gouley's tunneled sounds.

We have omitted to speak of one feature of the work which is decidedly objectionable. We refer to the mean character of many of the cuts with which the book is embellished (?), especially those intended to illustrate the cutaneous lesions of syphilis. They really illustrate nothing, and had much better have been left out entirely.

The Student's Manual of Venereal Diseases, being the University Lectures delivered at Charity Hospital, Blackwell's Island, during the Winter Session of 1879–'80. By F. R. STURGIS, M. D. New York: G. P. Putnam's Sons, 1880. Pp. 196.

THE writer who undertakes to make an elementary text-book for students assumes a special responsibility. First impressions are apt to be the most indelible ones; hence it is important that they be as nearly correct as possible. An elementary treatise needs not to concern itself with the more intricate or unsettled problems of the subject; its scope is limited to simple, undisputed principles. But, the more the liability to error is diminished, the higher and more exacting should be the standard. The most that can be required of such a work is clearness and accuracy, and on these points especially it must challenge criticism. We can not say that these requirements have been fully met in Dr. Sturgis's Manual. Excellent as it is in many points, the book bears evidence either of undue haste or of an inadequate sense of this responsibility—faults which its authoritative tone, justified by the fact that it is addressed to students, renders all the more important.

This general criticism may be illustrated by a few examples: The writer gives as a reason for discarding the word "chancre" as the name of the initial lesion of syphilis, that "it is confusing and means nothing." The term chancroid, however, is retained in its usual sense. If chancre "means nothing," we would ask, why, *a fortiori*, does not the derivative also mean nothing? It would appear much more logical to abandon the term "chancroid," and reserve "chancre" for non-infecting venereal sores, for which the Germans have already given a precedent. Again, we must take exception to the directions which the author gives to abstain from mercurial treatment till after the appearance of the secondary symptoms, on the ground that mercury retards the development of the secondary manifestations, and so "leaves the surgeon in doubt as to what the disease really is." If the surgeon is convinced that by constitutional treatment during the initial stage he can modify the subsequent lesions, either as to the period of their occurrence, or, as Diday and others maintain, as to the gravity of their character, why is it not his manifest duty to avail himself of such treatment? At any rate, the questions involved merit an impartial statement, and the writer might safely have left their decision to the judgment or conscience of the reader.

The author shows an inclination to "formulate rules" or to "tabulate axioms," which occasionally leads him into dangerous positions. For example: "*Urethritis in the female is always due to some venereal affection.*" A very strong asseveration. Again: "*Gonorrhœa has no period of incubation.*" As an isolated statement this is misleading, and conveys the idea that the disease manifests itself directly after exposure; while, on the contrary, a period of several days often elapses before signs of the disease are apparent—a period which should have been acknowledged, notwithstanding the term "incubation" as applied to gonorrhœa may be objectionable. The following extraordinary rule appears on page 55: "*Squamous affections of the palms of the hands and of the soles of the feet are nearly always syphilitic, and require anti-syphilitic treatment.*" This is altogether too sweeping.

Unguarded statements or expressions abound throughout the book. We are told that one of the syphilides is found chiefly "on the *volar* surfaces of the arms and legs." We are informed that the warts which occur as a complication of gonorrhœa or chronic discharges are "sometimes called" "*broad* condylomata." Doubtless no one knows better than the writer that the name of the growths under consideration is *condylomata acuminata*, while the *condylomata lata* are the vegetations which occur in syphilis. It is stated that in oöphoritis "the skin covering the ovarian region shows signs of inflammation." In speaking of the pustular syphilide, the writer observes that "this variety begins differently from any which we have heretofore examined, having its seat more deeply imbedded in the tissues than the papule, and starts from the true skin, *and not* in the epidermis"—the inference being that the papular syphilide *does* begin in the epidermis.

But we have not yet spoken of what is perhaps the most serious fault in the book. We refer to the irregular form of most of the prescriptions. We are bewildered by such expressions as "kali iodidum" (why not *kali iodatum*, which would at least have been the correct German form?); "alumenis pulv." and "alumen. sulph.," after the writer has been advising alum; "syr. calcis et sodæ hypophos."; "theobroma," where *olei theobromæ* should have been written. After recommending the sulphide of calcium, he writes—"℞ Calcii sulph.," which might equally well stand for the sulphide, the sulphite, or the sulphate (gypsum). Such forms as "mass. hydrarg.," "hydrarg. bichlor.," "hydrarg. protiodid.," and "biniod.," "acidi nitrici, c. p.," "fer. pulv.," "Sig. p. r. n.," etc., though perhaps comprehensible enough, are decidedly objectionable in a "Manual for Students." Finally, we must object to the unusual strength of some of the preparations recommended. A lead wash for use in vulvitis is composed of "liq. plumb. subacet.," one part to water two parts. Could the writer have intended the "*liquor plumbi subacetatis dilutus*"? For infantile syphilis he prescribes gray powder in from three- to five-grain doses three times a day, or (and this is his favorite method of treatment) he applies directly to the skin of the child's body a *twenty per cent.* oleate of mercury spread upon a cloth, which is renewed every second or third day. Are not these heroic measures?

The work has its excellent points, but we have deemed it more important to speak of its faults, which will doubtless be corrected in future editions.

Cancer of the Rectum: its Pathology, Diagnosis, and Treatment, including a Portion of the Jacksonian Prize Essay for 1876. By W. Harrison Cripps, F. R. C. S., etc. London: J. & A. Churchill, 1880. Pp. viii–191.

The scope of the original essay on "Cancer of the Rectum, considered with Reference to the Possibility of Cure by Extirpation," has been enlarged by the author, and this valuable little book is the result. In it the whole subject is considered, though by no means exhausted. In the introduction, the nature of cancer and the question of its constitutional or local origin are dealt with, the word cancer being used in the sense of malignancy, and the theory of local origin rather than of diathesis being held. The chapter on the normal anatomy of the rectum, illustrated by microscopic views, is good so far as it goes, but the mucous membrane is the only part which is thoroughly studied. Further on, another chapter is devoted to the surgical anatomy, which is more complete. The measurements of different anatomists of the distance from the anus to the reflection of the peritonæum on the posterior wall are followed by this statement: "After careful measurement in a large number of bodies, I believe that two and a half inches, when the bladder and rectum are both empty, and an additional inch when distended, will be about the average distance." We judge this to be a mistake on the part of the proof-reader, especially as on p. 147 it is stated that, "It is well to remember in the female how near the perinæum the peritoneal membrane descends, it being much more commonly at a shorter distance than three inches than at a distance in excess of that measurement. In the male, however, *three and a half to four inches* from the anus is the common site for the reflection of the peritonæum"—a statement much nearer the truth than the former.

The chapter on pathology is all too short to do justice to the subject. In speaking of the four varieties usually found in this part—scirrhous, medullary, epithelial, and colloid—attention is called to the difficulty of drawing any fast line between the first three; and the variation in structure noticed in different specimens is attributed rather "to the character of the disease and the tissue affected than to any essential difference in the nature of the original disorder. It not uncommonly occurs that the special characters presumed to be typical of each variety may be observed in the several portions of the same specimen, or a growth which, when first removed by operation, presented one type, will, on its recurrence, present another." As the chief characteristic in malignant rectal disease is, in almost every case, a development of gland-tissue in an abnormal situation, Mr. Cripps endeavors to classify these adenoid growths by dividing them into, 1 Embryonic adenoid disease, and, 2, The true adenoid disease; the former including the malignant diseases described as the varieties of sarcoma and cancer, and the latter represented by the papillomata or villous tumors. After making this distinction, the microscopic and other appearances of the two varieties and their modes of extension are dwelt upon at some length.

We sympathize with this effort to simplify the pathology of these often doubtful tumors, but still the old names will hold, and probably for a long time to come we shall see the names myeloid and melanoid sarcoma, with carcinoma and epithelioma, in their various modifications, applied to these tumors. The author makes no mention of the rare growths which sometimes appear here, as curiosities, but this would hardly be within the range to which he has confined himself.

The chapters on diagnosis are all that could be desired, especially in those parts where hæmorrhage, obstruction, and villous and "disseminated polypoid" growths are described; indeed, all those parts of the work in which the author deals with clinical facts are excellent. In treatment, we are glad to see an attempt to limit the operation of lumbar colotomy to a narrower range of application. The time when the presence of a cancer of the rectum, with more or less pain, was considered sufficient indication in itself for this formidable operation, has indeed gone by. The pain may be due not to the passage of fæces over an ulcerated surface so much as to involvement of neighboring parts, or to the irritation of the sphincter muscle and the spasm which is kept up by the discharge—in neither of which cases will colotomy be of any service. Obstruction, too, may be overcome by mild and persistent dilatation, with proper regulation of diet and the use of laxatives, and the patient be rendered fully as comfortable as by an artificial anus. In this connection the author should not have omitted all mention of Verneuil's cases of external proctotomy with the écraseur, and the wonderfully good results he has obtained by this simple measure.

In speaking of excision, the operation is traced from Morgagni down to the present time, the chief credit of establishing it on a firm basis in the present century being given to the paper of Lisfranc, read before the Acad. Royale de Méd., March 24, 1830. This part of the subject might be brought down a little nearer to date in a book bearing the stamp of the present year, and some of the more recent German literature might be added with advantage, but the indications for restrictions upon and methods of performing the operation are freely and clearly stated: "Out of thirty-six cases recorded, defecation was normal in twenty-three, while fæces could be retained, when not too fluid, in six cases, incontinence resulting in seven instances only."

The book is very readable, and we are sorry to see it marred by careless proof-reading. This, however, will probably be corrected in another edition, which we hope soon to welcome.

A Practical Hand-book of Medical Chemistry, applied to Clinical Research and the Detection of Poisons. Partly based on "Bowman's Medical Chemistry." By William H. Greene, M. D., etc. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. 310.

This work is divided into three parts: Part I treats of the organic proximate principles taking part in the animal economy; Part II deals with the analysis of the secretions, excretions, etc.; and Part III is devoted to the detection of poisons. An appendix embraces volumetric analysis and allied topics. The matter is well arranged in sub-sections.

While not calculated to rank among works that would be sought after by the professed analyst, it goes sufficiently into detail to satisfactorily cover the ground that the practitioner of medicine is likely to feel called upon to make himself familiar with. As a work of reference for physicians, it will doubtless answer the purpose exceedingly well.

Observations on Fatty Heart: comprising Remarks on the Morbid Anatomy, Symptoms and Diagnosis, Prognosis, Etiology, and Treatment. An Essay, by Henry Kennedy, A. B., M. B. (Univ. Dublin). Dublin: Fannin & Co.; London: Baillière, Tindall & Cox, 1880. Pp. vi–171.

This essay is the substance of papers and communications previously published by the author, with the results of experience since acquired. He agrees with the majority of recent writers on this subject in regarding fatty heart as part of a general disease, and rarely a local affection. Two great divisions are made—fatty growth and fatty degeneration. The former is the more frequent form, usually accompanying obesity, but both varieties may coexist. Valvular disease is associated with fatty growth in one out of five cases, and it is the aortic valves which are implicated, as a rule. Fatty growth, with or without aortic lesion, may be diagnosticated with certainty, but in true fatty degeneration, where there is little or no enlargement, and where valvular disease is the exception, a certain diagnosis is attended with difficulty. The suggestions as to food, exercise, remedial measures, and the general management of this disease, are good and practical. Dr. Kennedy believes that pernicious anæmia and general paralysis of the insane are forms of fatty disease.

The Principles and Practice of Gynæcology. By Thomas Addis Emmet, M. D., etc. Second edition, thoroughly revised. With 133 illustrations. Philadelphia: Henry C. Lea, 1880. Pp. 875.

So short a time has elapsed since the first edition of Dr. Emmet's excellent work was noticed in this "Journal" that a formal review at the present time seems uncalled for. We will, therefore, simply congratulate both the author and the profession upon the degree of appreciation that the work has secured. In its present form the book stands as a monument of the life-long devotion of a man of rare capacity to a field of practice which, when he first entered upon it, had been but little cultivated in this country. It is in no small degree that its present glories are due to his individual efforts. Long before his book appeared, his oral teachings had made their impress, along with that of his lesser writings, upon a great portion of the profession throughout the land, and even in foreign countries; and now the wide diffusion of this ripe and formal embodiment of his views will extend that impress still further, and endue it with a permanence that can not fail to be far-reaching in its influence upon future doctrine and practice.

Photographic Illustrations of Skin Diseases. By GEORGE HENRY FOX, A. M., M. D., etc. Parts 5, 6, 7, and 8. Colored plates. New York: E. B. Treat. 4to. Pp. 8 (each).

THE preceding parts of Dr. Fox's work have already been noticed in this "Journal," and we need only say, in regard to those now mentioned, that they are fully up to the high standard of excellence that the author has achieved throughout. They include eight pictures of various forms of eczema, one of varicose ulcer, one of psoriasis, two of lupus, three of epithelioma, two of ringworm, two of lichen planus, and one of lichen ruber.

Skin Diseases, including their Definition, Symptoms, Diagnosis. Prognosis, Morbid Anatomy, and Treatment. A Manual for Students and Practitioners. By MALCOLM MORRIS, Joint Lecturer, etc. With illustrations. Philadelphia: Henry C. Lea, 1880. Pp. 320.

THIS small volume is quite ambitious in its scope, for it includes the consideration of scarlatina, morbilli, rötheln, variola, varicella, vaccinia, typhus, typhoid fever, diphtheria, and equinia, in addition to the skin diseases proper. It opens with a sketch of the anatomy and physiology of the skin and of its morbid anatomy. The classification of skin diseases adopted by the author is founded upon that of Hebra and that of Wilson—the classes being named from their anatomical features, while the whole range is embraced in the two divisions: diseases of the skin proper and those of its appendages. Many of the individual names have been adopted from Bulkley.

In speaking of vaccinal erysipelas, it is stated that it rarely results from lymph which has passed through the human subject, but occurs more frequently after inoculation direct from the cow. This impression is prevalent in Great Britain, but years of experience on the continent and in this country have shown it to be erroneous. Septicæmic rashes are defined as "rashes occurring during septicæmia." The omission of this definition would scarcely lessen the reader's information, we should say. We note with approval that the name "lichen psoriasis," employed by Hutchinson, figures as a synonym of lichen planus. In the treatment of eczema quite a number of expedients are mentioned, but the variations in treatment according to the actual state of things present are not put in such a manner as to enable the practitioner to follow indications. For instance, the treatment with irritants is briefly described, but the way in which it acts is not alluded to, nor is any further specification made of the sort of cases in which it should be used, than that they be "chronic, inveterate, and localized." The whole subject of eczema takes up only sixteen pages. The disease cheiro-pompholyx is described without the slightest allusion to Dr. Tilbury Fox's studies of it, or to the term dysidrosis, which he applied to it. The term lupus erythematosus is used in the sense attached to it on the continent and in this country.

Such are the principal peculiarities that we have noticed in the book. We may add that, in the case of several of the more important diseases, the diagnostic marks are conveniently arranged in a tabular form. The book adds nothing to our knowledge of dermatology, and we do not feel sure that it presents our knowledge in any better shape for ready appreciation than is to be found in most of the books previously in use. Nevertheless it is, in the main, a fair sketch of the present state of dermatology.

The Hair: its Growth, Care, Diseases, and Treatment. By C. Henri Leonard, M. A., M. D., etc. Illustrated by 116 engravings. Detroit: C. Henri Leonard, 1880. Pp. 316.

This work seems suited rather for the general reader than for physicians. The former will doubtless find it interesting and instructive. It is handsomely printed, and the cuts are very clear.

Books and Pamphlets Received.—The Black Arts in Medicine, with Anniversary Address. By John D. Jackson, A. M., M. D., etc. Edited by L. S. McMurtry, A. M., M. D. Cincinnati: Robert Clarke & Co., 1880. Pp. 74. ═══ Health and Healthy Homes; a Guide to Domestic Hygiene. By George Wilson, M. A., M. D., etc. With notes and additions by J. G. Richardson, M. D., etc. Philadelphia: Presley Blakiston, 1880. Pp. 314. ═══ Lessons in Gynecology. By William Goodell, A. M., M. D., etc. With ninety-two illustrations. Philadelphia: D. G. Brinton, 1880. Pp.

454. ═══ Treatise on Therapeutics. Translated by D. F. Lincoln, M. D., from French of A. Trousseau and H. Pidoux. Ninth edition, revised and enlarged, with the assistance of Constantin Paul. Vol. I. New York: William Wood & Co., 1880. Pp. iv–802. [Wood's Library of Standard Medical Authors.] ═══ The Pharmacopœia of the British Hospital for Diseases of the Skin. London. Second edition. Edited by Balmanno Squire, M. B. (Lond.), etc. London: J. & A. Churchill, 1880. Small 8vo, pp. 92. [From the Editor.] ═══ A System of Medicine. Edited by J. Russell Reynolds, M. D., F. R. S., etc. With numerous additions and illustrations by Henry Hartshorne, A. M., M. D., etc. In three volumes. Vol. III, Diseases of the Digestive, Blood, Glandular, Urinary, Reproductive, and Cutaneous Systems. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. 990. ═══ The Utricular Glands of the Uterus, and the Glandular Organ of New Formation which is developed during Pregnancy in the Uterus of the Mammalia, including the Human Species. By Professor Giovanni Battista Ercolani, Permanent Secretary, etc. To which is appended his Monograph upon the Unity of the Anatomical Type of the Placenta, etc., also a general summary and classification, written expressly for this edition. With a quarto atlas and fifteen plates. Translated from the Italian under the direction of Henry O. Marcy, A. M., M. D., etc. Boston: Houghton, Osgood & Co., 1880. Pp. x–805; atlas, pp. 21, and heliotype plates. ═══ Pathogenetic Outlines of Homœopathic Drugs. By Dr. Med. Carl Heinigke, of Leipzig. Translated by Emil Tietze, M. D., of Philadelphia. New York: Boericke & Tafel, 1880. Pp. viii–576. ═══ The American Armamentarium Chirurgicum. New York: George Tiemann & Co. ═══ The Diagnosis of Diseases of the Spinal Cord. An Address delivered to the Medical Society of Wolverhampton, October 9, 1879. By W. R. Gowers, M. D., F. R. C. P., etc. With additions and illustrations. London: J. & A. Churchill, 1880. Pp. viii–80. ═══ The Medical Register of New York, New Jersey, and Connecticut. For the year commencing June 1, 1880. Published under the supervision of the New York Medico-Historical Society. William T. White, M. D., Editor. Vol. XVIII. New York: G. P. Putnam's Sons, 1880. Pp. xciii–264. ═══ Carlsbad and its Natural Healing Agents, from the Physiological and Therapeutical Point of View. By J. Kraus, M. D., etc. With notes introductory by the Rev. John T. Walters, M. A., etc. Second edition, revised and enlarged. London: Trübner & Co., 1880. Pp. 103. ═══ Antiseptic Surgery; an Address delivered at St. Thomas's Hospital, with the subsequent Debate, etc. By William Mac Cormac, A. M., F. R. C. S. E. and I., M. Ch. hon. caus., etc. London: Smith, Elder & Co., 1880. Pp. xi–286. ═══ Second edition of Malaria and its Effects. By J. W. Younge, M. D. Fort Wayne, Ind.: Page, Taylor & Co., 1880. Pp. 32. ═══ Alcohol; its Function and Place. A Lecture delivered, etc. By Thomas R. Fraser, M. D., F. R. S., etc. With diagrams and tables. Edinburgh: David Douglas, 1880. Pp. 88. ═══ A Practical Treatise on Sea-Sickness; its Symptoms, Nature, and Treatment. By George M.

Beard, A. M., M. D., etc. New York: E. B. Treat, 1880. Small 8vo., pp. v–74. [Price, 50 cents.] ===== The Influence of School-Life upon the Eyesight, with special reference to the Public Schools of Dayton. By W. J. Conklin, M. D., etc. Submitted to the Board of Education, March 12, 1880. Printed by order of the Board. Dayton, O., 1880. Pp. 32. [From the author.] ===== On the Management of Infantile Eczema. By L. Duncan Bulkley, A. M., M. D. Pp. 11. ===== Relations of Communities and States during Epidemics; an address by the Honorable James B. Eustis, delivered at the commencement of the Medical Department of the University of Louisiana, New Orleans, March 19, 1880. New Orleans, 1880. Pp. 11. ===== Sixty-sixth Annual Report of the Trustees of the Massachusetts General Hospital, 1879. Boston, 1880. Pp. 44. ===== The Management of Children in Sickness and in Health. A Book for Mothers. By Annie M. Hale, M. D. Philadelphia: Presley Blakiston, 1880. Small 8vo, pp. 110. ===== Report of the Special Committee of the Common Council of the City of Albany on the Affairs of the Albany Medical College and the Removal of Dr. John Swinburne. Pp. 16. ===== The Fifty-sixth Annual Report of the Officers of the Retreat for the Insane at Hartford, Conn. Hartford: Press of the Case, Lockwood & Brainard Company, 1880. Pp. 86. ===== Report of the Proceedings in the Case of Ruths *vs.* Reuling, tried in the Circuit Court of Howard County, Md., March term, 1880. Baltimore: Globe Steam Print, 1880. Pp. 61. [From Dr. Reuling.] ===== The Bromide of Ethyl as an Anæsthetic. By J. Marion Sims, M. D., LL. D. (Read before the New York Academy of Medicine, March 18, 1880.) With Discussion. Pp. 22. [From the author.] ===== On the Relations of the Medical Profession to the Trade Interests of the Materia Medica, and A Note on Pepsin. By Edward R. Squibb, M. D., of Brooklyn, followed by a reprint of a paper entitled, A Ready Method of Testing Pepsin. New York: H. T. Cornett. Pp. 18. ===== Remarks on Rectal Feeding in Disease. By William Warren Potter, M. D., Batavia, N. Y. New York: Trow, 1880. Pp. 22. [Reprint.—From the author.] ===== The Diagnosis and Treatment of Obstetric Cases by External (Abdominal) Examination and Manipulation. By Paul F. Mundé, M. D., etc. New York: William Wood & Co., 1880. Pp. 114. [Reprint.] ===== Diseases of the Maxillary Sinus. By Edward Borck, M. D., etc. Pp. 3. [Reprint.—From the author.] ===== Thomas Keith and Ovariotomy. By J. Marion Sims, M. D., LL. D. Pp. 16. [Reprint.] ===== A Case of Intra-Ovarian Pregnancy, with Post-Mortem Examination. By Talbot Jones, M. D., of St. Paul, Minn. Philadelphia: 1880. Pp. 11. [Reprint.] ===== The Abuses of Medical Charities. By M. P. Hatfield, A. M., M. D., etc., and Roswell Park, A. M., M. D., etc. A paper read before the Chicago Medical Society, February 2, 1880. To which is appended the report of a committee appointed by the society. Chicago: Knight & Leonard, 1880. Pp. 22. [Reprint.] ===== Bericht der ersten österr. Privatheilanstalt für Sprachkranke zu Wien (1877–'9), erstattet von Dr. Rafael Coën. Wien: Verlag des Autors, 1880. Pp. 16. [Reprint.—From the author.] =====

Ovarian Tumors. At what Stage of the Disease is it the Proper Time to Operate? By Edward Borck, M. D., etc. St. Louis: Hugh R. Hildreth Printing Co., 1880. Pp. 7. [Reprint.—From the author.] ═══ A Case of Compound Dislocation of the Wrist. Reported to the St. Louis Medical Society. By Edward Borck, M. D., etc. St. Louis: Hugh R. Hildreth Printing Co., 1880. Pp. 6. [Reprint.—From the author.] ═══ Time of Conception and Duration of Pregnancy. By Geo. J. Engelmann, M. D., etc., St. Louis: McCormick, Nixon & Co., 1880. Pp. 7. [Reprint.] ═══ On Fluid Extracts as proposed for the coming Pharmacopœia. Detroit: George S. Davis, 1880. Pp. 7. [Reprint.]

◆

Clinical Reports.

BELLEVUE HOSPITAL.

Reported by Gaspar Griswold, M. D.

A CASE OF DIFFICULT DIAGNOSIS: AUTOPSY DISCLOSES GASTRIC CARCINOMA.

(Service of Dr. E. G. JANEWAY.)

J. C., thirty years of age, Irish, a waiter, was admitted November 19, 1879. His family history was unimportant. He denied having had syphilis. He admitted having drunk hard for the last three or four years, but had suffered from no serious illness until a few weeks before his admission, when he became conscious of pain in the epigastrium, attended with tenderness on pressure. The ingestion of food caused discomfort, amounting at times to pain, the symptoms being much relieved by vomiting. This vomiting, occurring a few minutes after the introduction of food, had been a prominent source of discomfort for several weeks before the patient's admission. At no time had he noticed blood in the matters vomited. He was pale, and looked run down; only food of the blandest character and in small quantities could be retained. There was well-marked anorexia; the tongue was furred and coated. On examination, no enlargement of the spleen or diminution in the size of the liver was found; there was no apparent tendency to ascites, and no jaundice had at any time been present. Cirrhosis of the liver was therefore excluded. No tumor could be felt, and there was no family history of carcinoma. These points, together with his age and the absence of a history of hæmatemesis, seemed to militate against a diagnosis of cancer of the stomach. His sex, the dull, heavy character of the pain, and the absence of hæmatemesis went against the probability of ulcer of the stomach. A probable diagnosis of subacute gastritis was arrived at. Examination showed the urine to be normal. *January 20, 1880.*—The vomiting has continued, in spite of treatment, any change being for the worse. No hæmatemesis has occurred. A careful examination to-day discloses a tumor in the epigastrium, which seems to pulsate. The patient is somewhat intractable, and the rigidity of his abdominal muscles makes exploration difficult. Auscultation over the tumor detects a double murmur, blowing in character. No pain in the back has at any time been present. In spite of this, the existence of abdominal aneurism seems more than probable. *February 25th.*—No marked change has been noted. Vomiting after eating, pain in the epigastrium, anorexia, coated tongue, emaciation, all continue as before described. The patient's condition is worse, rather than improved. The tumor in the epigastrium has slightly increased in size, and the double murmur can be heard more distinctly; it is not, however, audible behind. The pulsation of the tumor, although not very marked, seems distinct. The diagnosis of aneurism is adhered to. *April 10th.*—The patient is much weaker; he keeps his bed most of the time. Beyond a slight increase in size, no change has taken place in the tumor. All the signs and symptoms in the case are more marked, without having changed materially in any way. No hæmatemesis has occurred, and the murmur is still inaudible behind. The mental peculiarities of the patient are a serious obstacle to thorough and satisfactory examination. *May 23d.*—Without any special occurrence worth mentioning, the patient has continued to grow weaker. He died to-day of asthenia.

The *autopsy* revealed a scirrhous cancer at the pyloric end of the stomach, which was, by inflammatory adhesions, bound somewhat closely to the adjacent viscera. The tumor was of about the size of an orange. The opening of the stomach into the duodenum was beginning to be constricted, but still freely admitted the little finger. A cicatrix in the mucous membrane at the pylorus marked the site of an old ulcer. There were no cancerous deposits in any other viscus. The aorta was normal throughout; the murmur heard must, therefore, have been due to compression of it by the tumor. The other organs showed nothing noteworthy.

CEREBRO-SPINAL MENINGITIS: AUTOPSY.

(SERVICE OF DR. E. G. JANEWAY.)

D. W., a boy of fourteen years, born in this country, was admitted April 20, 1880. A week before his admission he experienced, without premonition or antecedent malaise, a chill of considerable severity, followed by headache and by pain and stiffness in the back and neck. These symptoms, unattended with high fever, had persisted up to the date of his admission. He was then found to have a temperature of 101·75° F., with a pulse of 82 (this was in the afternoon). In addition, he presented opisthotonos, retracted abdomen with constipation, and herpes labialis. There were no petechial spots. He was rational, could move both arms and legs, and complained of phonophobia and photophobia, with general hyperæsthesia. His urine presented nothing unusual. Ophthalmoscopic examination showed the presence of choked disks. He was ordered a laxative, bromide of potassium gr. xxx, t. i. d., and blisters behind the ears. *21st.*—Temperature and pulse the same. Slight delirium. Nausea and anorexia very marked. Vomits occasionally. *26th.*—Pulse 120; temperature 102°. Is comatose; face cyanotic, respiration stertorous. Irregular twitchings of the muscles occur from time to time. Toward evening there is some improvement. *27th.*—Stimulants have been freely administered since last note. Patient seems much better; is rational, but too weak to notice what is taking place about him. Temperature 99°; pulse 100. Anorexia and vomiting; refuses food, and is with difficulty persuaded to eat. *May 12th.*—Since last note the patient's temperature has at no time risen above 100°. Although not delirious, he has been stupid and listless. The opisthotonos and pain have disappeared, but vomiting and distaste for food persist. He has steadily become weaker, without apparent exacerbation of his disease, and died to-day of asthenia.

The *autopsy* showed congestion and thickening of the cerebral pia mater, most marked at the base of the brain. Considerable exudation was present upon the pons Varolii, and in the vicinity of the optic commissure. The ventricles were very much distended with a flocculent serum. Congestion and exudation were found in the lumbar and dorsal regions of the spinal cord, most marked on their posterior aspect; the cervical portion of the cord seemed not to have been affected. Throughout the lower lobes of both lungs were found scattered points of lobular pneumonia.

FROSTBITE OF THE TOES, FOLLOWED BY GANGRENE; LISFRANC'S AMPUTATION; SYME'S AMPUTATION ULTIMATELY REQUIRED.

(SERVICE OF DR. ERSKINE MASON.)

T. Y., a seaman, twenty-five years of age, was admitted to the hospital April 7, 1880. On January 2, 1879, the toes of his left foot were frostbitten. The foot was dressed with olive oil, and he was confined to his bunk. By January 20th, when the vessel arrived at Norfolk, Va., the toes had become gangrenous. On January 22d, Lisfranc's operation was performed for their removal. The patient had recovered and was able to walk about by April 3d. The stump, however, although it healed kindly, was never a comfortable one. For months the patient was always obliged to rest his weight upon the heel, pressure upon the ball of the foot causing deep-seated pain. About two weeks before his admission, a year after the operation, the patient began, while working as a 'longshoreman, to suffer from intense pain and burning in the stump. Soon after this the foot swelled greatly, and a point of ulceration appeared, and spread rapidly. This condition became so bad that he gave up work, and applied for admission to the hospital. The foot at this time was much swollen, and quite an extensive ulcerative process had established itself upon the end of the stump. Elevation of the foot and the application of hot fomentations having brought the part to a proper condition, Dr. Mason performed Syme's amputation on April 10, 1880. The operation was performed with antiseptic precautions, carbolic-acid solutions being used according to Lister's method; the arteries were tied with carbolized catgut ligatures, and the dependent portion of the flap was perforated for drainage. No considerable elevation of temperature followed the operation; the discharge was slight; and by April 21st the sutures had all been removed, and the patient was allowed to sit up. On May 17th he was discharged with a good stump, upon which he could tread firmly without pain. The case is one of many in which, after a fair trial of Lisfranc's method, it has finally been necessary to do Syme's operation in order to procure a serviceable stump.

RECURRENT NASAL POLYPUS.

(SERVICE OF DR. FRANK H. HAMILTON.)

W. G., a woman twenty-eight years of age, Irish, was admitted to the hospital on April 14, 1880. During the last few years she had had four fibrous growths removed from her nose by Dr. Hamilton, the last operation having been performed on July 2, 1878. From that time she had no trouble until January, 1880, when she first noticed a small swelling of the right side of the nose. This slowly increased until it caused so much discomfort that she entered the hospital. On April 16th, the diagnosis of nasal polypus having been established, the patient was etherized, and Dr. Hamilton proceeded to operate. An incision an inch long was first made, a little to the right of the bridge of the nose, and parallel to it. A second incision of the same length was then made, at right angles to the first and terminating at its lower extremity. The triangular flap thus formed was then turned back, disclosing a tumor, irregularly spheroidal in shape, and about three quarters of an inch in its different diameters. It was found to be attached internally to the vomer, and externally to the turbinated bones and to the margin of the aperture communicating with the antrum. The separation of the tumor caused considerable hæmorrhage, and three ligatures were required. All remnants of the growth were then scraped from its bony attachments, and the flap was readjusted and secured with sutures. The wound was then washed with a carbolized solution (1–40), and a light dressing was applied. On April 19th the sutures were removed, almost complete union having taken place by first intention. The patient had experienced no constitutional disturbance as a result of the operation. *April 30th.*—Patient discharged cured. The cicatrix is healthy and not conspicuous.

EMBOLISM OF THE FEMORAL ARTERY FOLLOWING ACUTE LOBAR PNEUMONIA; GANGRENE OF THE LEG.

(SERVICE OF DR. FRANK H. HAMILTON.)

F. R., a laborer, thirty-seven years of age, was admitted to the hospital April 28, 1880. Three weeks before his admission the patient experienced an attack of acute lobar pneumonia. Ten days from the commencement of this attack, while convalescing, he was suddenly seized with a pain in the right leg, extending upward along the thigh. This was soon followed by loss of feeling in the right foot, which at the same time became colder than normal. During the week following the toes became dark and dry, and at the time of admission the changed color had advanced to within four or five inches of the patella. On examination, no pulsation could be detected in the femoral artery beyond a point an inch below Poupart's ligament; the limb was in a condition of dry gangrene almost to the knee. Above this point the integument was hyperæsthetic. Hot fomentations were applied at a temperature of 110°, to be changed every fifteen minutes, and it was decided to wait for the line of demarkation to form. *May 4th.*—The patient is weak, but does not suffer much. He experiences occasional elevations of temperature, neither very high nor persistent. The gangrene is evidently being arrested about two inches below the knee. *17th.*—The hot fomentations have been continued, and there is now a distinct line of demarkation, along which ulceration is rapidly progressing. The patient's general condition is much improved, and may be called fair. *23d.*—Ulceration has gone on until the bone is exposed. The popliteal artery was tied to-day at the bottom of the ulcer. *24th.*—To-day Dr. Hamilton decided to saw off the bones at the line of demarkation. In progress of doing this, he found the head of the tibia so loose that he decided to remove it entire, cutting through the few filaments which held it. The upper two inches of the fibula, being fixed in healthy tissue, were not disturbed. No anæsthetic was administered, the parts being dead; yet the patient complained of intense pain once or twice during the operation, as if nervous filaments were present which had escaped the general sloughing. The stump was dressed with balsam of Peru. *25th.*—The patient's condition is good; he is much more comfortable, now that the weight of the gangrenous tissues has been removed. *26th.*—The patient is comfortable and cheerful; the stump is granulating nicely, and everything seems to point to a good recovery.

Proceedings of Societies.

NEW YORK OBSTETRICAL SOCIETY.

A STATED meeting was held March 16, 1880, Dr. W. T. LUSK, President, in the chair.

REMOVAL OF THE OVARIES IN A CASE OF FIBROUS TUMOR OF THE UTERUS.—Dr. M. D. MANN presented specimens with the following history: A widow, forty-four years of age, came under his observation in November, 1879. During the previous six years she had had a fibrous tumor of the uterus that had caused her to lose a great deal of blood, and the hæmorrhages were becoming more and more profuse. Dr. Thomas had diagnosticated a polypoid growth in the uterus, and had expressed the opinion that it could be removed. When Dr. Mann saw the case he concluded that, while this diagnosis was probably correct, it would be extremely difficult to remove the polypus. In December the patient again consulted Dr. Mann, and reported that she had been flowing very profusely, and had also suffered severely from pain. The pain was quickly relieved with viburnum prunifolium. Subsequently Dr. Mann made a more thorough examination, after having attempted to dilate the cervix with a sea-tangle tent. He found the uterus occupied by several fibroids, and extending considerably above the umbilicus. The cervix was a dense, fibrous mass, which yielded so little to the tent that he was unable to pass the finger up to the internal os. He recognized the polypoid growth, but declined to undertake its removal, as he considered full dilatation of the cervix impossible. Dr. Baker, of Boston, had expressed to the patient the opinion that removal of the ovaries might afford some relief, and to that operation she was willing to submit, but Dr. Mann was unwilling to undertake the operation until further means for controlling the hæmorrhages had been employed. Various means having previously been employed by Dr. Baker, Dr. Mann injected hot water into the cavity of the uterus, but it gave rise to so much pain and general disturbance that the patient positively refused to submit to any more temporizing measures. Dr. Mann then called Dr. Baker, of Boston, Dr. Mundé, of New York, and Dr. Wainwright, of Hartford, in consultation; and the conclusion reached was that the only chance of prolonging the patient's life was to remove the ovaries and bring on the menopause. The operation was accordingly performed on the same day, in the presence of the above-named gentlemen and Dr. Campbell, of Hartford. It became necessary to make the abdominal incision sufficiently long to allow of the introduction of the whole hand before the ovaries could be found. The peritonæum was nearly free from adhesions. Both ovaries were felt deep in the abdominal cavity, behind the uterus, and closely adherent to the surface of the tumor. They were tied off by ligatures passed through the tissues which held them closely attached, and the surface was thoroughly seared with Pacquelin's cautery. The hæmorrhage during the operation was not very profuse, but was troublesome to stop. Hypodermic injections of brandy were administered during the operation. The abdominal cavity was cleansed, and the wound was closed with silver-wire sutures. Full antiseptic precautions were observed. The patient did not rally well, and death occurred at the end of the second day. At the autopsy no evidence of peritonitis was found. A slight amount of union had occurred in the wound. The uterus contained a large polypoid growth, attached by a small pedicle deep in the uterine cavity, which, just before the operation, measured eight and a half inches, an increase of an inch and a half within the previous two months. The condition of the cervix was such—surrounded by and filled with a dense fibrous growth—that, in Dr. Mann's opinion, it would have been impossible to remove the polypus through it during life. ═══ The President thought it was the only case upon record in which the ovaries had been removed for uterine fibroid, in which there was also a polypus in the uterine cavity. ═══ Dr. Mundé remarked that in another case of like character he should advise removal of the uterus. Certainly the shock would be no greater than from an operation involving such great difficulty in removing the ovaries. ═══ Dr. Mann believed that it would have been impracticable to remove the uterus in his case, because a pedicle could not have been formed of the cervix. ═══ Dr. Skene thought that the point that should decide which of the two should be removed, the uterus or the ovaries, was, the practicability of obtaining a pedicle in the uterine operation.

Slippery-Elm Probes and Dilators.—Dr. Skene referred to the use of the root of the common slippery elm for probes and dilators in gynæcological cases. His attention had first been directed to their use by Dr. Tuckerman, of Ohio, who had employed them successfully. If a piece, of the length desired, rounded at the end, the bark being left on, were dipped in warm water for a few minutes, its flexibility and mucilaginous covering would enable the operator to dilate the urethra or the cervical canal, or explore cavities, with more facility and less damage to the mucous membrane than with any dilator he had ever employed. ═══ Dr. W. M. Polk referred to a case of stricture of the urethra in a man who, during the last fifteen years, had kept his urethra dilated with slippery-elm bougies. He used the root without the bark, and had been recommended to do so by Dr. Hunt, of New Orleans. He introduced them well into the bladder.

Instrument to aid in introducing Dr. Chamberlain's Medicated Bougies.—Dr. P. F. Mundé exhibited such a modification of Dr. Barker's ointment syringe as permitted of its use with one hand. It was designed to facilitate the introduction of the bougies while in a pliable condition, thereby avoiding the insolubility which resulted from a sufficient exposure to the air to stiffen them. ═══ Dr. Hunter had used a small hard-rubber suppository tube for the same purpose. ═══ Dr. Janvrin had used Dr. Mundé's instrument with much satisfaction.

Cutting Curette.—Dr. H. T. Hanks showed a curette with a curved shank, and having a cutting portion, convex outside and concave inside, which he regarded as a safer cutting instrument than had yet been devised. ═══ Dr. Ward remarked that Dr. Thomas used the tupelo tent before curetting, the dilatation favoring the efficient and advantageous use of the instrument. ═══ The President was accustomed to dilate with a tent before curetting, except where the patient was etherized, when rapid dilatation might be employed. ═══ Dr. Hanks always dilated with his hard-rubber cervical dilators when the curette did not enter the uterine cavity readily. ═══ Dr. Mundé remarked that he had not experienced any difficulty in removing the material readily from the uterine cavity with Dr. Thomas's *large* curette. ═══ Dr. Gillette rarely dilated before using the curette, and believed that the fungoid growth would ooze from the cervix spontaneously within a short time after being separated. ═══ Dr. Harrison thought that in certain cases it was impossible to remove intra-uterine growths without using the cutting curette, and referred to a case in which he had removed two nodules, of about the size of filberts, which had been examined microscopically by Dr. Maxwell and reported to contain sarcomatous elements, which Dr. Harrison thought could not have been present, for the woman made a perfect recovery.

EPITHELIOMA OF THE CAVITY OF THE BODY OF THE UTERUS.—Dr. A. J. C. **SKENE** reported the case of a patient, aged thirty-eight years, who had suffered for two years from severe neuralgia, had been under treatment, and first came under his observation six months ago, when the uterus was found enlarged, and its mucous membrane roughened. He then removed what he supposed to be fungoid growths. Moderate relief was afforded, but the symptoms returned, and she was again operated upon. Again relief was obtained, again the symptoms returned, and again the patient was operated upon by dilating the cervix and removing with a large blunt scoop a great quantity of soft, spongy material, from which a microscopist diagnosticated malignant disease of the epithelial variety. It was the third case of the kind Dr. Skene had seen, if the diagnosis was correct, and in them all there had been one point, relating to differential diagnosis, which he thought worthy of mention, and that was, extremely severe pain occurring early in the disease. He was inclined to the opinion that severe pain occurring early had some value as a diagnostic symptom of malignant disease of the cavity of the body of the uterus, independent of the variety of cancer which involved the deeper structures of the organ and independent of peritonitis or cellulitis. ═══ Dr. **MANN** referred to a cancer just above and around the internal os, which tended to confirm Dr. Skene's observation. ═══ **THE PRESIDENT** thought that Dr. Skene's observation was the usual one, thus making a valuable diagnostic symptom of invasion of the body in case of cancer of the cervix uteri. ═══ Dr. **JANVRIN** referred to a case of extensive epithelioma of the fundus of the uterus, diagnosticated by Dr. Welch, pathologist to the Woman's Hospital, in which there was an excessively offensive odor, but no pain whatever. ═══ Dr. **MANN** referred to a case of cancer of the fundus, in which there was no pain. ═══ Dr. C. S. **WARD** referred to a case of malignant disease of the body of the uterus which had been under observation fifteen months, in which *pain* and bloody vaginal discharge had been the leading symptoms from the beginning, but no notable odor. ═══ Dr. **SKENE** remarked that he did not mean to include cancer of the body of the uterus generally in speaking of the three cases, for in only these three had the disease seemed to be limited to the mucous membrane.

CHROMIC-ACID POISONING.—Dr. **MUNDÉ** reported a case in which the patient, suffering from cancer of the cervix in the ulcerative stage, developed severe symptoms of irritant poisoning, immediately after a curetting of the crater-shaped cavity, and the application of pure chromic acid by painting it over the freshened surface. The patient became thoroughly collapsed, but finally recovered from the effects of the poison. He had not before seen evidence of such rapid absorption—the first symptoms developing within ten minutes after the application was made—nor had he seen specially unpleasant symptoms follow the local use of chromic acid.

THERAPEUTICAL SOCIETY OF NEW YORK.

THE tenth stated meeting of the Society was held February 18, 1880, Dr. A. **JACOBI**, President, in the chair.

Dr. E. C. **SEGUIN**, Chairman of the Committee on Neurotics, presented a preliminary report on the use of hyoscyamia as an hypnotic and antispasmodic. Cases were brought forward which showed that the drug was very efficient in many instances. Other observations, however, were being collected, and a fuller report would soon be made for publication.

In executive session the following gentlemen were elected Corresponding Members: Drs. J. COLLINS WARREN, EDWARD H. BRADFORD, and JAMES JACKSON PUTNAM, of Boston; Dr. S. B. WARD, of Albany, N. Y.; Dr. J. B. HEARD, of Lagrange, Ga.; and Dr. DANIEL PARKER, of Calvert, Texas.

The eleventh stated meeting was held April 9, 1880, Dr. H. T. HANKS, President *pro tem.*, in the chair.

Dr. ANDREW H. SMITH, Chairman of the Committee on Restoratives, presented the following report:

REPORT ON THE USE OF CERIUM OXALATE FOR THE ALLEVIATION OF COUGH.—The report is based upon cases furnished by the following observers: Dr. HOBART CHEESMAN, 28 cases of phthisis; Dr. GEORGE BAYLES, 28 cases (7 of phthisis, 3 of chronic bronchitis, 2 of acute bronchitis, 1 of laryngitis, 2 of the cough of dentition, 3 of dyspepsia, 1 of empyema, 3 of pertussis, 2 of rubeola, 2 of spasmodic asthma, 1 of senile asthma, 1 of gastric irritation); Dr. J. R. LEAMING, 5 cases of phthisis; Dr. A. HADDEN, 3 of phthisis; Dr. F. A. CASTLE, 2 of phthisis; Dr. C. E. BILLINGTON, 10 of phthisis; Dr. A. E. M. PURDY, 2 (1 of emphysema, 1 of bronchitis); Dr. E. M. CAMMANN, 1; Dr. A. H. SMITH, 5 of phthisis.

In the course of Dr. Cheesman's observations, which were made at St. Luke's Hospital, he often intermitted the use of the oxalate for a time, to observe the effect of its withdrawal, and then returned to its use. Thus it happened that sixty-nine distinct trials of it were made, although the number of patients was only twenty-eight. In Dr. Cammann's notes the data for a diagnosis are fully given in each case. A few of these cases will be cited, illustrating as nearly as possible the results obtained. To save space, the record of physical signs, etc., will be omitted.

CASE I.—Harrington Newhall, aged twenty-seven, New York, carpenter, admitted July 14, 1879. Patient has been coughing for six months, has become emaciated, lost strength and appetite, and at intervals has had pain in the right side of the chest. His mother died of phthisis. He was put on the ordinary tonic treatment for phthisis. *26th.*—Patient is troubled with a severe, hollow, hoarse cough, and is kept awake at night by it. Expectoration is scanty. The cough has been troublesome for six months. Since admission he has been through the list of ordinary cough medicines, with no relief. To-day all cough medicine was stopped. Ordered oxalate of cerium, in dry powder, gr. v, on waking every morning and at bedtime. *August 1st.*—The cough has been markedly relieved since he began taking the powders. The hard, hollow coughing has entirely ceased. *6th.*—Coughs very little. Oxalate of cerium stopped. *15th.*—Complains again of dry hacking cough. *20th.*—Oxalate resumed. *22d.*—For two days patient has not complained of coughing. *25th.*—Patient, on being questioned, says that he coughs much less, but that the cough is tighter. *26th.*—Coughed scarcely any last night. *27th.*—Complained of coughing more last night and yesterday. Oxalate increased to gr. x night and morning. *31st.*—No more complaint of coughing. Patient is making rapid general improvement. *September 2d.*—No more coughing; gaining in every way. Oxalate reduced to one dose daily, at night. *8th.*—No more coughing. Has gained 8½ lbs. during the past week. *12th.*—Coughs no more. Has sore throat. Laryngoscopic examination reveals tubercular laryngitis. *16th.*—Complains again, for the first time in two or three weeks, of coughing. Coughs during the daytime. Ordered to take the oxalate twice a day. *18th.*—Cough no longer troublesome. Stop the oxalate. *25th.*—Discharged (markedly) improved. On August 11th his weight was 101¾ lbs.; on September 22d, 111 lbs. No opium or other sedative, other than oxalate of cerium, was given after July 26th.

CASE III.—Thomas Hall, aged forty-seven, laborer, admitted July 16,

1879. Took cold three months ago, and has coughed ever since, and had pain across the front of the chest after coughing. Has night sweating and occasional rigors. Is very emaciated and feeble, and has very troublesome diarrhœa and swelling of the feet and legs. Physical examination shows dullness over the upper part of the right lung behind, amphoric respiration and pectoriloquy at the apex. Ordinary treatment ordered. *August 4th.*—Cough is very troublesome, especially at night. ℞. Cerii oxalatis gr. v, to be given early in the morning and at bedtime. *6th.*—Cough not so bad, but not markedly relieved. *7th.*—Same report. Ordered cerium oxalate increased to gr. viij. *8th.*—Increased cerium oxalate to gr. x (night dose). The cough is troublesome at night. *18th.*—There has been no more complaint of coughing. Oxalate stopped. *24th.*—Patient has been quite free from complaints of all kinds for two weeks. Night nurse reports no coughing of consequence at night. *September 3d.*—Patient has suffered scarcely at all from coughing for several weeks. Died from asthenia.

Case IV.—Frederick Weingardt, aged thirty-seven, wheelwright, admitted July 29, 1879. He got a cough first nine or ten years ago, and it troubled him at frequent intervals until four years ago, since which time it has been continuously troublesome. For the first few years he had frequent spitting of blood, but none now for several years. Expectoration muco-purulent. During the ten years he has become emaciated and has regained his flesh and strength at intervals, but for the past year has got constantly weaker, and been unable to work. Has had shortness of breathing four or five years, worse now than ever before. Has anorexia and swelling of the feet. The face and extremities are constantly blue, the veins of the whole body stand out, and the surface is dusky.

Diagnosis: fibrous phthisis. Patient has a very hard and troublesome cough. *August 1st.*—Ordered cerii oxalat. gr. v, qu. nocte; also a mixture of iodide of potassium, hyoscyamus, and sirup of wild-cherry bark. *6th.*—Cough better. The cough-mixture is stopped. *18th.*—Patient has been quite free from coughing, and has not complained of it since the last note. *24th.*—He never complains of coughing, but has most distressing dyspnœa, and is gradually dying from suffocation. Night nurse reports, "only occasional, and no severe coughing." *25th.*—Night nurse reports, "no coughing all night." *26th.*—Same report. *28th.*—Died.

Case VIII.—Maria Tonshuden, aged thirty-eight, admitted July 26, 1879. Has coughed all winter, had pain in the chest, increased by full inspiration, and has lost strength and flesh. No family history of phthisis. Physical examination reveals rude respiration and coarse râles at the right apex, and evidences of general bronchitis. *August 23d.*—Patient complains a good deal of coughing on going to bed, on awakening in the morning, and at frequent intervals during the day, and also of nausea and retching sometimes in the morning. Ordered cerii oxalat. gr. v, on awaking every morning. (First dose on the 24th.) *26th.*—Patient reports that she had no coughing nor nausea this morning, but that she coughed last night after going to bed as usual. *Evening.*—Had nausea this afternoon. *27th.*—Says she coughs much less—only once or twice slightly this morning. *28th*, p. m.—Says she has coughed more than usual to-day. Ordered oxalate of cerium gr. x, at night, in addition to her morning dose. *29th.*—Coughed less last night. *30th.*—Still coughs some. Increase morning dose of cerii oxalas to gr. x. *September 1st.*—Cough relieved. *2d.*—Cough not troublesome. Stop morning dose of oxalate of cerium. *8th.*—No more complaint of coughing. (She had no more nausea.) Discharged improved (markedly).

Dr. George Bayles reports the following cases:

Case I.—*Phthisis.*—A woman, aged twenty-two, in last stage. Suffered extremely from racking cough and vomiting. Oxalate of cerium ordered, gr. v, dry on the tongue, an hour before breakfast, and gr. x at bedtime, daily. The paroxysms of cough subsided in less than a week, only cough enough remaining to bring up the expectoration from time to time. The oxalate was stopped, and the old symptoms promptly returned, to be again relieved when the medicine was resumed. The nausea was also removed. Small doses were found to be sufficient to maintain the effect which the larger doses had initiated.

Three other cases of phthisis are reported by Dr. Bayles, in which the oxalate was used with marked benefit, and three in which it failed entirely. Three cases of chronic bronchitis are given, in which the cough was greatly relieved by five- and ten-grain doses morning and evening. In two cases of acute bronchitis, one of which was in a child of eighteen months, the cough was very promptly alleviated by the oxalate. In several other instances the remedy exerted no beneficial effect.

COUGH OF DENTITION.—CASE I.—A girl, six months old, nursing, healthy. Cough dry, accompanying aphthous inflammation of the mouth, or stomatitis. The mouth was cured in a few days, but the cough remained, if anything, more violent than before. Oxalate of cerium, gr. j in the morning and gr. ij in the evening, was given. In twenty-four hours there was a decided abatement of cough, and in two days no cough at all.

CASE II.—A boy, ten months old, bottle-fed, apparently healthy, only four teeth cut and others pressing the gums. Coughs a great deal. Soft mucous rattle; also vomits frequently. Nurse has used many common remedies, with only partial benefit. Night cough especially troublesome. Gave at once, experimentally, oxalate of cerium, gr. ij in the morning and gr. iij at night. After three days not only the vomiting, but the cough, had disappeared.

DYSPEPSIA.—CASE I.—A woman, aged seventy-five, had suffered during the autumn and winter from senile debility and dyspepsia. A trying symptom was a dry, hacking cough, that gave her no rest day or night. Gave her oxalate of cerium, gr. v in the morning and gr. x at night, every alternate day for a fortnight, when many of the dyspeptic symptoms had disappeared, and the cough was no longer distressing.

Two other patients with cough connected with dyspepsia were greatly benefited by the oxalate of cerium, while in several other instances no relief was obtained from it.

A case of laryngitis following diphtheria in a child of four years, and in which there was aphonia with almost incessant stridulous cough day and night, yielded completely in five days to doses of 2 grains in the morning and 5 grains in the afternoon, the cough ceasing entirely, and the voice being restored.

A case of very distressing cough attendant upon empyema was greatly improved by morning and evening doses of the oxalate.

Three severe cases of pertussis, in two of which there was frequent vomiting, and in one convulsions, improved remarkably under the use of the oxalate. In some other cases of whooping-cough, there was very little if any benefit. In two cases the cough attendant upon measles was promptly and decidedly relieved by the oxalate. A persistent use of the medicine seemed to result in considerable relief in two cases of spasmodic asthma. One case of senile asthma was also benefited. A somewhat remarkable case, in which the only persistent sequel of a severe gastritis, caused by swallowing carbolic acid, was cough with profuse mucous, frothy expectoration, was entirely relieved by the oxalate of cerium after the cough had continued for several months, and had baffled all treatment. There was no bronchitis.

Dr. LEAMING presents two cases of chronic lung disease following pneumonia, in which there was distressing cough attended by nausea and vomiting. Oxalate of cerium, in doses of five grains twice a day, promptly relieved not only the cough, but also the gastric symptoms. In another similar case the relief was only partial, the dose not exceeding five grains. In a case of old fibroid phthisis, with cavities, the cough was relieved by the oxalate, except when the secretion was abundant. In the fifth case, in which the cough was distressing, and the expectoration free, the oxalate, in doses of five grains, gave little or no relief. Dr. Leaming adds: "Other cases impress me that this remedy is, perhaps, the most valuable that I have used, inasmuch as no unpleasant consequences follow. Indeed, the digestion is generally improved notably. It seems to have less effect when the expectoration is free and abundant."

Dr. **Hadden** furnishes three cases, all of phthisis, in which the oxalate, in doses of ten grains morning and night, had very little effect. He considers, however, that the drug had not a fair trial.

Dr. **Castle** presents two cases of phthisis, in both of which the cough was considerably ameliorated by the use of the oxalate, the dose not exceeding six grains twice a day. In one case an inferior preparation was employed for a short time, and the difference in the effect was very striking.

Dr. **Billington** reports ten cases of phthisis, in which the cough was moderated for a few days in five, decidedly benefited in three, and remained unaffected in two. The dose was limited to five grains twice a day. One of his cases so well illustrates the good effects often obtained that it is given in full: J. S., aged twenty-two, phthisis of four months' standing, following pneumonia, softening on right side, coughed day and night, profuse yellow expectoration and vomiting, night sweats. Has taken the oxalate five days; coughs less; no vomiting; the expectoration is less, and he sleeps better.

Dr. A. E. M. **Purdy** reports two cases:

Case I.—A lady, aged sixty-five. Catarrhal attack, ending in bronchitis. Temperature 101·75° F. Cough distressing and spasmodic in character. Oxalate of cerium was given in four-grain doses 4tâ qu. h., but produced little if any effect. It was then given in ten-grain doses twice a day, with immediate improvement, no other medicine being used, the cough ceasing almost at once. The relief was permanent.

Case II.—A young lady with an obstinate cold, accompanied by a hacking cough, which resisted ordinary treatment. Ten grains of oxalate of cerium morning and evening checked the cough at once. Dr. Purdy has used the remedy in several other cases, of which he has no notes, and in most of them with favorable results.

Dr. E. M. **Cammann** presented the case of a lady who had had for at least three or four months, and without any determinable lesion, a dry double cough, which occurred every few moments. There was no expectoration. Oxalate of cerium, in doses of five grains twice a day at first, afterward three times a day, gave prompt relief, reducing the cough to one third its former frequency. The treatment was continued five days, then stopped, and the cough gradually returned.

Your reporter's cases are five in number: four of phthisis and one of sub-acute bronchitis. In three of the former the oxalate gave decided relief for a time, and then seemed to lose its effect. In the case of bronchitis the cough was permanently relieved.

These cases, extending over a considerable range of different conditions attending the cough, may warrant us in endeavoring to find a solution of the question as to the manner of action of the oxalate of cerium in cough. Its well-known sedative effect upon the stomach would lead us to expect benefit from it in cases in which the cough is excited or aggravated by reflex gastric irritation, and this accords with the results obtained, especially in some of Dr. Bayles's cases. Perhaps we do not fully appreciate the extent to which gastric irritation exists in phthisis, and the extent to which it aggravates the cough. A poor stomach is always considered a very unfavorable element in a case of consumption, and this may be not alone on account of the obstacle to nutrition, but also on account of irritation reflected to the lungs. The susceptibility of the lungs to reflex irritation is shown by the phenomena of ear-cough, and by the common experience of a persistent dry cough cured at once by a brisk cathartic.

But it seems probable that, in addition to this, the oxalate is a direct sedative. Several cases are on record in which a considerable degree of stupor was produced by even moderate doses, and, while the rarity of such a result leads to the suspicion that an impure article was employed, yet the fact that pertussis, the cough of rubeola, etc., have been relieved by it would indicate that the drug exerts a general sedative action by being taken into the blood. From two experiments upon himself, your reporter is of the opinion that the oxalate is mildly hypnotic.

From a study of the cases presented to them the committee feel warranted in the following conclusions:

1. Cerium oxalate may be given safely in doses of ten grains or more three times a day for many days in succession.
2. The only symptom noted from such doses is a slight dryness of the mouth for the first few days.
3. It is probably more efficient when taken dry upon the tongue.
4. Its effects are not fully apparent until it has been taken two or three days, and they continue about the same length of time after its use is suspended.
5. For chronic cough, it is best taken on an empty stomach, early in the morning and at bedtime, with other doses during the day if required, the initial dose for an adult being five grains.
6. It is, in a majority of cases, an efficient cough medicine, at least for a considerable time, and is very valuable as an alternate with other drugs used for that purpose.
7. It does not disturb the stomach, as do opiates and most other cough remedies, but, on the contrary, it tends to relieve nausea and to improve digestion.
8. The different preparations in the market are not of equal value, and, when success is not obtained with one, another should be substituted.

In executive session the following gentlemen were elected Corresponding Members: Drs. W. W. Keen and S. W. Gross, Philadelphia; Dr. A. Ernest Sansom, London.

Andrew H. Smith, M. D., *Secretary.*

◆

Reports on the Progress of Medicine.

QUARTERLY REPORT ON OBSTETRICS AND GYNÆCOLOGY.

No. II.

BY FRANK P. FOSTER, M. D.,
PHYSICIAN FOR DISEASES OF WOMEN TO THE OUT-PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL.

OBSTETRICS.

1. ENGELMANN, G. J.—Time of conception and duration of pregnancy. "St. Louis Cour. of Med.," May, 1880.
2. SIMPSON, A. R.—Report of the Edinburgh Royal Maternity and Simpson Memorial Hospital for the quarter ending 31st January, 1880. "Edinburgh Med. Jour.," May, 1880.
3. THEOPOLD.—Geburtshülfliche Miscellen. "Deutsche med. Wochenschr.," Feb. 14, 1880.
4. LEISHMAN, W.—The cavity of the cervix uteri in the last months of pregnancy. "Glasgow Med. Jour.," March, 1880.
5. HICKS, J. B.—Cases of lateral obliquity of the pregnant uterus. "Obstet. Jour. of Gr. Brit. and Ire.," Feb. 15, 1880.
6. THORNTON, J. K.—Uterine outgrowth removed during pregnancy; premature labor; death from obstruction of intestine. "Trans. Obstet. Soc. London," vol. xxi, 1879.
7. SCHWARZ, E.—Retroversio uteri gravidi mit Ruptur der Harnblase und exitus letalis. "Centralbl. f. Gynäk.," March 13, 1880.
8. ATLEE, W. F.—Report of a case where mother and child died during labor, from difficulties attributed to shortness of the pedicle, secured by a clamp, in ovariotomy. "American Jour. Med. Sci.," April, 1880.
9. PIPPINGSKÖLD, F.—Two cases of pregnancy and parturition shortly after single ovariotomy and cauterization of cystic follicles in the remaining ovary; and one case of ovariotomy during pregnancy near term. "Am. Jour. of Obstet.," April, 1880.
10. HARVEY, R.—Note on an acoustic sign heard after the death of the fœtus. "Trans. Obstet. Soc. London," vol. xxi, 1879.
11. RAFFAELE.—Putrefazione del feto dentro e fuori l'utero, per le sue applicazioni della medicina legale. "Giorn. Internaz. delle Sci. Med.," N. S., anno I, fasc. 12.
12. WINSLOW, R.—Ten consecutive breech presentations in the same woman. "Amer. Jour. Med. Sci.," April, 1880.
13. KÜSTNER, O. — Die Behandlung vernachlässigter Querlagen und das Schultze'sche Sichelmesser. "Centralbl. f. Gynäk.," April 10, 1880.
14. MOORE, J. R.—Hour-glass contraction previous to the delivery of the child. "Chicago Med. Jour. and Examiner," March, 1880.
15. BRAITHWAITE, J.—On digital dilatation of the os in labor. "Trans. Obstet. Soc. London," vol. xxi, 1879.
16. VALENTA, A.—Congentinatio orif. uteri bei einer Zwillingsfrühgeburt —ursprüngliche Wehenschwäche — Hysterostomatomia mit, Pilocarpin ohne, Erfolg. "Memorabilien," 1880, 1 Heft.

17. Barr, D. M.—Anæsthesia in labor. "Med. and Surg. Reporter," March 13, 1880.
18. Watkins, A. F.—Chloral as an anæsthetic during labor. "Amer. Practitioner," March, 1880.
19. Ross, J.—Rotation of fœtal head from occiput posterior to occiput anterior positions by manual interference. "Canada Med. Record," March, 1880.
20. Hubert.—De la version par manœuvres externes, du mécanisme des présentations naturelles et vicieuses de l'enfant, et de l'exploration du ventre (Acad. de Méd. de Belgique). "Lyon Méd.," March 7, 1880.
21. Mundé, P. F.—The diagnosis and treatment of obstetric cases by external (abdominal) examination and manipulation. "Amer. Jour. Obstet.," July, Oct., 1879, April, 1880.
22. Reid, W. L.—On a labor obstructed from an unusual cause. "Edinburgh Med. Jour.," May, 1880.
23. Delore, X.—Étude sur le bassin rachitique. "Gaz. Hebdom.," Nos. 19 and 20, 1880.
24. Lamadrid, J. J.—A case of labor complicated by a narrow pelvis and prolapse of the cord—craniotomy; with remarks. "Proc. Med. Soc. of County of Kings," March, 1880.
25. Galabin, A. L.—Two cases of unusual pelvic deformity. "Obstet. Jour. of Gr. Brit. and Ire.," April, 1880.
26. Lusk, W. T.—On version, forceps, and the expectant plan in the treatment of contracted pelvis. "Lancet," May 1, 8, 1880.
27. Barnes, R.—On the use of forceps and its alternatives in lingering labor. "Trans. Obstet. Soc. London," vol. xxi, 1879.
28. Bartlett, J.—The mechanics of the obstetrical forceps. "Chicago Med. Jour. and Examiner," March, 1880.
29. Burge, J. H. H.—A new obstetric forceps—multiple, adjustable, and readjustable. "Proc. Med. Soc. of County of Kings," March, 1880.
30. Richardson, W. L.—Lecture on decapitation. "N. Y. Med. Jour.," June, 1880.
31. Simpson, A. R.—Basilysis: a suggestion for comminuting the fœtal head in cases of obstructed labor. "Edinb. Med. Jour.," April, 1880.
32. Harris, R. P.—The Cæsarean operation in the United Kingdom; with a continuation of the statistical record of Dr. Radford, from 1868 to 1879. "Brit. Med. Jour.," April 3, 1880.
33. Brunn, Q.—Et Tilfaelde af Sectio cæsarea. "Hospitals-Tidende," Feb. 25, 1880.
34. Hubert, E.—Amputation utéro-ovarique. "Jour. des Sci. Méd. de Louvain," March, 1880.
35. Harris, R. P.—The Porro modification of the Cæsarean operation in Continental Europe, etc. "American Jour. of Med. Sci.," April, 1880.
36. Berruti, G.—Contributo allo studio della istero-ovariotomia cesarea. "Giorn. Internaz. delle Sci. Med.," N. S., anno I, fasc. 10, 11, 12.
37. De Ranse, F.—Quatre nouveaux faits d'opération césarienne suivie de l'amputation utéro-ovarique, d'après la méthode de Porro. "Gaz. Méd. de Paris," March 13, 1880.
38. Aly, P.—Ein ungünstig verlaufener Fall von Kaiserschnitt nach Porro. "Centralbl. f. Gynäk.," March 27, 1880.
39. Hyatt, H. O.—Ruptured uterus. "North Carolina Med. Jour.," Feb., 1880.

40. **Croom**, J. H.—Case of intra-uterine hydrocephalus and rupture of the uterus, with remarks. "Obstet. Jour. Gr. Brit. and Ire.," March, 1880.
41. **Ferrant.**—Trois cas de rupture utérine. "Jour. des Sci. Méd. de Louvain," April, 1880.
42. **Cunningham**, F. D.—Rupture of the vagina during labor and escape of fœtus into the abdominal cavity. Delivery through the rent in the vagina; death on the third day; autopsy; remarks. "Virg. Med. Monthly, Feb., 1880.
43. **Garrigues**, H. J.—The obstetric treatment of the perinæum. "Amer. Jour. Obstet.," April, 1880.
44. **Hamilton**, J. G.—Rupture of the recto-vaginal septum, terminating in spontaneous cure. "Toledo Med. and Surg. Jour.," April, 1880.
45. **Duncan**, J. M.—On expression of the cord. "Trans. Obstet. Soc. London," vol. xxi, 1879.
46. **Horne**, J. F.—Abortion and its treatment: with special regard to the injection of warm water. "Obstet. Jour. of Gr. Brit. and Ire.," March, 1880.
47. **Macan**, A. V.—Hæmorrhage from the organs of generation during pregnancy and parturition. "Brit. Med. Jour.," April 17, 1880.
48. **Herman**, G. E.—A case of concealed accidental hæmorrhage. "Obstet. Jour. of Gr. Brit. and Ire.," Feb. 15, 1880.
49. **Moses**, S. G.—Post-partum hæmorrhage. "St. Louis Courier of Med.," March, 1880.
50. **Taylor**, I. E.—1. Flagellation of the child's back previous to its complete delivery, as a preventive of uterine hæmorrhage. 2. Flagellation of the abdomen of the woman after the delivery of the placenta, as a substitute for introduction of the hand into the cavity of the uterus. "Independent Pract.," Feb., 1880.
51. **Madden**, T. M.—The prevention and treatment of post-partum hæmorrhage. "Brit. Med. Jour.," April 17, 1880.
52. **De la Roche**, A.—De la rupture du col de l'utérus comme cause d'hémorrhagie après l'accouchement. "Lyon Méd.," March 14, 1880.
53. **Walters**, J.—On the treatment of post-partum hæmorrhage by injections of hot water. "Brit. Med. Jour.," April 17, 1880.
54. **Delore.**—Sur le tamponnement intra-utérin. "Lyon Méd.," May 2, 1880.
55. **Walter**, W.—The treatment of post-partum hæmorrhage by the intra-uterine injection of hot water. "Brit. Med. Jour.," April 17, 1880.
56. **Laborde.**—La méthode des injections sous-cutanées appliquée à l'emploi de l'ergotine, principalement en obstétrique. "Tribune Méd.," March 28, 1880.
57. **Bernard**, W.—On the mode of conveying styptics to the bleeding orifices in post-partum hæmorrhage. "Brit. Med. Jour.," April 17, 1880.
58. **Pollard**, F.—On the alleged dangers of intra-uterine injections of perchloride of iron in cases of post-partum hæmorrhage. "Brit. Med. Jour.," April 24, May 1, 1880.
59. **Duncan**, J. M.—On intra-uterine puerperal coagula. "Edinb. Med. Jour.," March, 1880.
60. **Barker**, F.—Puerperal malarial fever. "Amer. Jour. of Obstet.," April, 1880.
61. **Bureau.**—Note sur l'influence réciproque de l'impaludisme et des suites de couches. "Revue Mens. de Méd. et de Chir.," March, 1880.
62. **Arjona**, D. B. M.—Doctrina de la fiebre puerperal. "Rev. de Med. y Cirug. Práct.," March 22, 1880.

63. Stadfeldt.—Ueber prophylaktische Uterusausspülung mit Karbolwasser post partum. "Centralbl. f. Gynäk.," March 27, 1880.
64. Coleman, R. T.—Puerperal convulsions. "Virg. Med. Monthly," March, 1880.
65. Ill.oway, H.—On the etiology of puerperal eclampsia. "Obstet. Gaz.," April, 1880.
66. Pardoen.—Trois observations d'éclampsie puerpéral. "Jour. des Sci. Méd. de Louvain," Feb., 1880.
67. Renaut, J.—Contribution à l'histoire de la phlegmatia alba dolens." Revue Mens. de Méd. et de Chir.," May, 1880.
68. Monod, E.—Étude clinique de la cystite chez la femme considérée spécialement dans ses rapports avec la grossesse et l'accouchement. "Annales de Gynécol.," Feb., March, April, May, 1880.
69. Greene, J. B.—On waxy degeneration of the placenta. "Amer. Jour. Obstet.," April, 1880.
70. Dumont, A.—Survie et développement du placenta après la disparition de l'embryon. "Jour. des Sci. Méd. de Louvain," Feb., 1880.
71. Battey, R.—Tubo-ovarian gestation; case; operation in fifth month; death. "Trans. Amer. Med. Assoc.," vol. xxx, 1879.
72. Routh, C. H. F.—On a case of extra-uterine pregnancy. "Trans. Obstet. Soc. London," vol. xxi, 1879.
73. White, J. P.—Extra-uterine pregnancy; death and removal of the fœtus. "Buffalo Med. and Surg. Jour.," March, 1880.
74. Young, G. P.—Extra-uterine pregnancy; operation; recovery. "Amer. Jour. Med. Sci.," April, 1880.
75. Lopes, A. L.—Preñez doble extra-uterina. "Revista de Med. y Cirug. Práct.," April 7, 1880.
76. Reid, W. L.—The shape of the head of an extra-uterine fœtus. "Obstet. Jour. of Gr. Brit. and Ire.," Feb. 15, 1880.
77. Langer, C.—Ueber die Textur der sogenannten Graviditäts-Narben. "Med. Jahrb.," von S. Stricker, I and II H., 1880.
78. Olshausen, R.—Asphyxia neonatorum und Hypnotismus. "Centralbl. f. Gynäk.," April 10, 1880.
79. Stumpf.—Ein hartnäckiges Ei. "Centralbl. f. Gynäk.," April 24, 1880.

4. Dr. Leishman attempts to explain the *apparent shortening of the cervix uteri in pregnancy*. The difficulty in reconciling the apparent shortening, as suggested by the fact that the tissue intervening between the child's head and the examining finger is no thicker in the immediate neighborhood of the os externum than at other portions of the lower segment of the uterus, with the real absence of shortening, as undeniably shown by the fact that after passing through the os externum the finger has yet to be carried an inch or so further before it reaches the os internum, has been found to attach chiefly to the state of things met with in primiparæ, since an apparent thorough obliteration of the cervix never takes place in a woman who has already borne a child. After pointing out the fallacy of Stoltz's ingenious explanation, the author describes a condition of the parts that he has recognized in several instances, namely, an obliquity of the cervical canal as compared with the general axis of the organ. In other words, the canal pierces the wall of the enlarged uterus, so to speak, in an oblique or valvular manner—the os externum being displaced backward and the os internum forward.

10. Dr. Harvey's *acoustic sign of the death of the fœtus* is described as a rustling sound, between large and small crepitation, heard in his case over the whole upper part of the uterus, the heart-sounds being absent. The sound had previously been described by Stoltz, who attributed it to gaseous decomposition of the liquor amnii. Dr. Harvey thought that in

his case it was due to the passage of air bubbles through the liquor amnii, the membranes having ruptured several hours before. In the discussion that followed the reading of Dr. Harvey's note, however, this explanation was not accepted. Dr. Brunton ascribed such sounds to muscular contraction, and Dr. Williams called attention to the improbability of air entering through the rent in the membranes, since the uterus would at once contract upon its diminished contents.

13. Küstner's article deals chiefly with *instruments for decapitation*, but the technics of spondylotomy in general is reviewed. Braun's "key-hook" he condemns as exceedingly dangerous, since, by the traction upon the child which is apt to be exerted with it, and by the violence which almost necessarily accompanies its forced rotation, the lower segment of the uterus, already predisposed to rupture (as shown by Bandl), is very apt to give way. He therefore prefers sharp hooks, and the sharper the better. Schultze's "sickle-hook" [Sichelmesser], which has a razor-edge, is described and figured, and preference is accorded it.

14. In Dr. Moore's case of *hour-glass contraction of the uterus before the birth of the child*, the condition was not discovered until version was undertaken, which operation was decided upon in consultation, as it was necessary to deliver the woman without delay. She was becoming exhausted as the result of prolonged and fruitless labor. The child's head tended persistently to override the brim of the pelvis in the right iliac region, and five hours had been spent in attempts to rectify this obliquity, which was obstinately reproduced with each pain. The author states that he has not been able to find in literature anything bearing directly upon hour-glass contraction before the birth of the child. We would refer him to the last American edition of Playfair's "Midwifery," edited by Dr. Harris, where he will find the subject discussed, with references to the writings of Dr. Alfred Hosmer and others. Even the connection between this form of irregular uterine action and the abnormal attitude of the head that formed so marked a feature in Dr. Moore's case (Litzmann's obliquity) has not escaped attention. For an excellent review of the latter topic, we would refer the reader to an article by Veit, in the "Zeitschrift für Geburtshülfe und Gynäkologie," iv Bd., 2 Hft.

20. The interest of Hubert's paper turns chiefly upon the operation of *version by external manipulation*. Upon an experience of thirty-four trials, of which all but one were successful, he founds the following conclusions: 1. External version should be done before labor begins, or as soon as possible after it has set in. 2. It may be practicable, however small the amount of liquor amnii, and sometimes even after its escape. 3. As a rule, we should bring down that pole of the fœtus which is nearest to the center of the pelvis. 4. The mother's abdomen should be relaxed to the utmost, and the manœuvres should be practiced in the intervals between pains. 5. The contraindications of the operation are few, and its advantages are indisputable.

26. Dr. Lusk's paper on the *management of labor with contracted pelvis* we have already given in abstract [see "THE NEW YORK MED. JOUR.," February, 1880, p. 188].

28. Dr. Bartlett, in his article on the *mechanics of the obstetrical forceps*, gives several reasons for preferring an instrument with a loose lock: 1. It is easier of application. 2. It is less apt to injure the child's head. 3. It can be used with less pain to the patient. 4. It is less liable to injure the mother's tissues. 5. A less amount of traction is necessary. 6. It holds the head, seized in whatever diameter or direction, with a powerful grasp. 7. If it be necessary to turn the head in the pelvis, as in rotating the occiput forward, the loose-lock forceps renders the operation safer and easier. The author has contrived a direct-traction forceps, the working of which must be very like that of Tarnier's instrument, save for the absence of the "guide" formed by the handles of the latter, which rise as the head advances. Dr. Bartlett's article is argumentative and demonstrative, and shows an amount of originality of thought seldom found in papers upon this subject.

31. *Basilysis* is a word coined by Dr. Simpson as a generic appellation for the various procedures which may be adopted for breaking up the basis cranii by operating upon it directly. The paper presents an historical and critical review of the instruments and methods that have been made use of in craniotomy, cephalotripsy, cranioclasm, cephalotomy, and transforation. The latter term has been more particularly applied to the process of breaking up the base of the skull by drilling holes in it, or, in the words of Guéniot, "sapping the sphenoid." The author is convinced that some modification of this method will be the operation of the future. He suggests "the use of a terebrator which bears more resemblance to Blot's perforator than to any other implement. A long steel rod, furnished with a wooden handle, terminates in a point which has a screwing surface of half an inch in length. At this distance from the point a broad shoulder will prevent the point from passing further through the structures it is piercing. Along one of its sides the rod is excavated to receive a branch, which is jointed to the main stem about four and a half inches from the shoulder. When the instrument is being screwed into the bones, this will be buried in the rod, and enter with it. Pressure on its handle will then push it out, as the blade of an hysterotome is pushed from its sheath, and dilaceration of the cranial floor at the point of perforation must ensue." The author has proved by experiment on the cadaver that with such an instrument very complete dissolution of the base of the skull can be brought about. If any extractive force is necessary, it will probably be best to exert it by means of the cranioclast.

36. Berruti gives an abstract of thirty-one cases of *Porro's operation*, including one of his own, with an elaborate account of the technics of the operation and a statement of its advantages.

38. Aly, who publishes a fatal case of *Porro's operation*, gives warning against the use of copper wire for tying the pedicle. In his case it broke while being tightened, and a "colossal" hæmorrhage took place, rendering several expedients necessary before it was permanently checked. The fatal result, however, is mainly attributed to the escape of blood and putrid fluid from the uterus into the peritoneal cavity when the uterine incision was made. To avoid such an occurrence, he suggests that before the uterus is opened the woman be turned upon her side, as in ovariotomy, the greater portion of the abdominal wound having previously been closed with sutures to prevent the escape of the intestines.

43. Dr. Garrigues, in his article on the *obstetric treatment of the perinæum*, first corrects several common errors in regard to the anatomy of the perinæum and adjacent parts. As to the prevention of laceration in labor, he is positive that much may be accomplished, although now and then the injury is unavoidable. He repeats the warning, and it can not be too often insisted on, that ergot should never be given during labor. Evacuation of the rectum at an early period in labor should always be brought about, no matter what the patient may say as to the free action of the bowels. He considers that the left lateral posture, during the child's passage through the vulvar orifice, aids in preventing injury to the perinæum by relieving it of the child's weight between pains. Emollients are of some service in the exceptional cases in which the parts are not sufficiently lubricated with the natural secretions. Anæsthesia during the passage of the child aids in retarding the expulsion by putting a stop to the action of the abdominal muscles, and thus favors gradual rather than sudden stretching of the tissues. The author regards manual support of the perinæum as of service, if done at the proper time and not overdone. His arguments upon this point are certainly very cogent. Displacement of the perinæum (stripping it back or drawing it forward) he thinks unadvisable in most instances, since such a proceeding would generally have the effect of disturbing the coincidence between the plane of the orifice and that of the shorter diameter of the head. As to retarding the birth by direct pressure upon the presenting part, the author seems to favor it in cases of precipitate labor. He very properly deprecates attempts to rectify the position and attitude of the child, remarking that Nature herself performs the best turnings of this kind, and that by enforcing a rectification in one place, we run the risk of doing harm in another place hidden from view. He considers it rational, however, to promote the normal movement of extension by pressing the presenting part toward the symphysis, preferably through the rectum. This manipulation may even be carried to the extent of a sort of enucleation. It is important not to press with so much force as to cause lacerations in the region of the clitoris. As regards manipulation of the shoulders, he would avoid the so-called rectification, and limit interference to the prevention of the simultaneous emergence of the two shoulders, by extracting the anterior one first. With quite justifiable reserve, he praises the operation of episiotomy, or lateral nicking of the orifice. In his experience, however, these relief incisions take a fortnight in healing, and then, instead of agglutination, they heal with a retracted cicatrix, leaving the orifice, as one of his patients remarked, "more open than before." Moreover, they are, contrary to what has been asserted, subjected to the contact of the lochial fluid. Finally, the operation does not with absolute certainty prevent laceration. After delivery the parts should at once be subjected to ocular inspection. If a rent is found extensive enough to require sutures, it is best to let the anæsthesia pass off for the time being, or wait until after the expulsion of the placenta, and then give the anæsthetic again. But there should be no further postponement —the immediate operation should always be done. Dr. Garrigues believes that many lacerations, while not severe enough to require so formal a proceeding, yet call for immediate adjustment. For such he earnestly recommends the use of *serres-fines*, but they should be of the sort that he has, after much pains, succeeded in getting made, and which are to be had of Messrs. G. Tiemann & Co. They are an inch and a quarter long, half an inch of which goes to the legs beyond the crossing, and end in minute claws. They are made of thin brass wire, nickel-plated, and so weak as to just keep the torn surfaces in contact. As a rule, they can be used only once, but their cheapness renders this consideration trivial. The simplicity of the proceeding is its great recommendation, and the pain is so slight that it may be done without saying anything about it to the patient or any one else. From one to three *serres-fines* are used, according to the length of the rent. Beginning at the anal end of the wound, the clamps are put on at right angles to it, their legs being buried to their full length in the tissues. Before applying them, the wound should be cleansed with carbolized water. It is seldom necessary to twist an artery, or cut off loose shreds of tissue. The clamps should be left in place four days. The knees should be bound together with a towel, carbolized vaginal injections used, and a daily aperient given. The remainder of the article is devoted to the suture operation. The entire paper teems with good sense, and the reader will find in it many useful hints in regard to the management of labor.

45. By *expression of the umbilical cord* Duncan means its extrusion by uterine expulsive action, rather than a mere prolapse by virtue of its being carried along in the rush of liquor amnii, and he points out that, in cases of expression of the cord, mere replacement or the knee-chest posture will not prove of much avail. In the discussion, Dr. Braxton Hicks coincided with the views expressed by Duncan, and stated that the course to be followed in cases of expression was to hasten the labor.

59. The substance of Dr. Taylor's remarks on *post-partum hæmorrhage* has already been given in this "Journal." [See the number for March, 1880, p. 298.]

60. Dr. Barker's paper on *puerperal malarial fever* will be found in abstract in the "Journal" for March, 1880, p. 294.

63. We learn from Stadfeldt's article that, for the *prevention of puerperal fever*, the routine practice at the University Lying-in Institution at Copenhagen is to use carbolic-acid vaginal injections before labor, the spray during labor, and intra-uterine carbolized injections after labor. The spray is used from the moment that any part of the child becomes visible until the vulvar lacerations have been united and the os uteri covered with a layer of prepared oakum. For the intra-uterine injections a three per cent. solution of carbolic acid is used, but in large quantity and in a full stream. They have been used in hundreds of cases, and no harm has followed.

Gynæcology.

1. Duncan, J. M.—Clinical lecture on some inflammations of the pudendum. "Med. Times and Gaz.," Feb. 21, 1880.

2. Thomas, T. G.—The female perinæum; its anatomy, physiology, and pathology. "Amer. Jour. Obstet.," April, 1880.

3. Tait, L.—On new methods of operation for repair of the female perinæum. "Trans. Obstet. Soc. London," vol. xxi, 1879.

4. Dowell, G.—Report of nine cases of laceration of the perinæum, cured by interrupted suture. "Galveston Med. Jour.," March 1, 1880.

5. Duvernoy, E.—Traitement des kystes des glandes vulvo-vaginales par les injections de chlorure de zinc. "Annales de Gynécologie," April, 1880.

6. De Amicis, T.—L'ascesso della glandola vulvo-vaginale e la fistola vulvo-rettale. "Giorn. Internaz. delle Sci. Med.," N. S., fasc. 1, 1880.

7. Thomas, T. G.—A clinical lecture on sarcoma of the vulva and perinæum. "N. Y. Med. Jour.," May, 1880.

8. De Meersman, C.—Un cas d'imperforation de l'hymen. "Jour. des Sci. Méd. de Louvain," March, 1880.

9. Di Semo, V.—Sul vaginismo. "Lo Sperimentale," April, 1880.

10. Snyder, D. J.—Osseous occlusion of the vagina. "Med. and Surg. Reporter," April 10, 1880.

11. De Luca.—Contribuzione alla patologia ed alla clinica del catarro venereo nella donna. "Giorn. Internaz. delle Sci. Med.," N. S., fasc. 2, 1880.

12. ——.—The hot-water vaginal douche. [Editorial.] "San Francisco Western Lancet," Feb., 1880.

13. Foster, F. P.—Remarks on vaginal tampons; with a description of a convenient method of tamponing the vagina. "N. Y. Med. Jour.," June, 1880.

14. Courty, A.—Nouveau moyen d'hémostasie préventive pour les opérations pratiquées sur l'appareil génital de la femme. "Annales de Gynécologie," May, 1880.

15. Goodell, W.—Vesico-vaginal fistula. "N. Carolina Med. Jour.," Feb., 1880.

16. **Henriet**, L.—De la fistule urétéro-vaginale à la société de chirurgie. "Tribune Méd.," March 21, 1880.
17. **Hart**, D. B.—On the position and distention of the female bladder. "Edinb. Med. Jour.," April, 1880.
18. **Skene**, A. J. C.—The anatomy and pathology of two important glands of the female urethra. "Amer. Jour. Obstet.," April, 1880.
19. **Aust-Lawrence**, A. E.—On disorders of micturition in women. "Obstet. Jour. Gr. Brit. and Ire.," April, 1880.
20. **Weiss**, A.—Gansekielfeder in der weiblichen Harnblase; Entfernung mittelst rascher Dilatation. "Med.-chir. Centralbl.," March 26, 1880.
21. ———.—Traitement des métrorrhagies. [Editorial.] "Concours Méd.," Feb. 21, 1880.
22. **Ranking**, S. A.—Arsenic in uterine hæmorrhage. "Practitioner," Feb., 1880.
23. **Duncan**, J. M.—On spontaneous dilatation of the virgin uterus, with hæmorrhage. Appendix to previous paper in Jan. No. "Obstet. Jour. Gr. Brit. and Ire.," March, 1880.
24. **Franck**.—Ein Beitrag zur Dilatation des Uterus. "Centralbl. f. Gynäk.," April 24, 1880.
25. **Duncan**, J. M.—On intra-uterine menstrual coagula. "Obstet. Jour. Gr. Brit. and Ire.," March, 1880.
26. **Herman**, G. E.—Cases illustrating the relation between uterine and ovarian pain at the menstrual period. "Obstet. Jour. Gr. Brit. and Ire.," March, 1880.
27. **Playfair**, W. S.—Introduction to a discussion on intra-uterine medication. "Brit. Med. Jour.," March 27, 1880.
28. **Tilt**, E. J.—On intra-uterine medication. "Brit. Med. Jour.," March 27, 1880.
29. **Battey**, R.—Intra-uterine medication by iodized phenol. "Brit. Med. Jour.," March 27, 1880.
30. **Battey**, R.—Intra-uterine medication by iodized phenol. "Virg. Med. Monthly," May, 1880.
31. **Ahlfeld**, F.—Ueber die Behandlung des Uteruscatarrhs und der Cervicalstenose nach Schultze'scher Methode. "Deutsch. med. Wochenschr.," April 3, 1880.
32. **Herman**, G. E.—A case of chronic hyperplastic endometritis (endometritis fungosa); with remarks on the treatment of metrorrhagia. "Brit. Med. Jour.," May 15, 1880.
33. **Whitbeck**, C. E.—Cases of malposition and disease of the uterus in young girls, as a cause of amenorrhœa and dysmenorrhœa. "Toledo Med. and Surg. Jour.," April, 1880.
34. **Smith**, A. H.—On the use of intra-uterine stem pessaries. "Phila. Med. Times," May 8, 1880.
35. **Cutter**, E.—My stem pessary. "Trans. Amer. Med. Assoc.," vol. xxx, 1879.
36. **Macdonald**, A.—Report of a case of metro-perimetritis ending in abscess of the uterus. "Edinb. Med. Jour.," April, 1880.
37. **Lewis**, E. S.—Chronic inversion of the uterus of fifteen months' standing reduced by manipulation and sustained elastic pressure. "New Orleans Med. and Surg. Jour.," March, 1880.
38. **Jenks**, E. W.—Supposed inversion of the uterus, fibroid development of posterior half of uterus, and vaginal atresia. "Chicago Med. Gaz.," March 5, 1880.
39. **Lowson**, D.—Case of hypertrophy of the median portion of the cervix uteri. "Lancet," Feb. 28, 1880.

40. CUTTER, E.—Report on electrolysis of uterine fibroids according to the method of Drs. Gilman Kimball, of Lowell, and Ephraim Cutter, of Boston, to date, April 1, 1879. "Trans. Amer. Med. Assoc.," vol. xxx, 1879.
41. CALDWELL, J. J.—The treatment of morbid growths, viz., of the mammæ, of the uterus, etc., by electro-cautery and electrolysis, with cases and illustrations. "Obstet. Gaz.," April, 1880.
42. MUCCI.—Polipo fibroso endo-uterino a comparsa intermittente asportato felicemente col laccio galvano-termico. "Lo Sperimentale," March, 1880.
43. THOMAS, T. G.—Removal of a large interstitial uterine fibroid. "Amer. Jour. Med. Sci.," April, 1880.
44. CUSHING, C.—Absorption of a large fibroid tumor of the uterus under the use of ergot. "Amer. Jour. Med. Sci.," April, 1880.
45. JACOBI, M. P.—Case of uterine fibroid treated by ergotine injections, and finally removed by means of Thomas's scoop. "Amer. Jour. Med. Sci.," April, 1880.
46. STOKER, W. R.—Successful removal of the uterus and one ovary for the relief of a subperitoneal uterine tumor. "Dublin Jour. Med. Sci.," Feb. 2, 1880.
47. LANE, L. C.—Per-vaginal enucleation of the uterus, with spontaneous closure of the peritoneal opening without suture. "Pacific Med. and Surg. Jour.," April, 1880.
48. CLAY, J.—On the treatment of cancer of the female generative organs by a new method. "Lancet," March 27, 1880.
49. GOODELL, W.—Clinical lecture on cancer of the cervix and vagina. "Med. Gaz.," May 22, 1880.
50. MOSES, G. A.—The propriety of surgical treatment of malignant diseases of the uterus. "St. Louis Courier of Med.," May, 1880.
51. KUHN, J.—Zur Kasuistik der Totalexstirpation des Uterus nach Freund. "Centralbl. f. Gynäk.," May 8, 1880.
52. BYFORD, W. H.—Displacement of the ovaries. "Boston Med. and Surg. Jour.," May 6, 1880.
53. CULLINGWORTH.—Fibroma of both ovaries. "Trans. Obstet. Soc. London," vol. xxi, 1879.
54. SIMS, J. M.—Thomas Keith and ovariotomy. "Amer. Jour. Obstet.," April, 1880.
55. LUTAUD, A.—Note pour servir à l'histoire de l'ovariotomie en France. "Gaz. Hebdom.," April 16, 1880.
56. BOECK, E.—Ovarian tumors: at what stage of the disease is the proper time to operate? "Obstet. Gaz.," March, 1880.
57. GOODELL, W.—Methods and results of ovariotomy. "Clinical News," March 6, 1880.
58. GALABIN, A. L.—A case of ovariotomy performed during the sixth month of pregnancy, without interruption of gestation. "Brit. Med. Jour.," March 13, 1880.
59. BATTEY, R.—Summary of the results of fifteen cases of Battey's operation. "Brit. Med. Jour.," April 3, 1880.
60. HILDEBRANDT.—Zur Castration der Frauen. "Deutsche med. Wochenschr.," Feb. 28, 1880.
61. OWEN, C. J. R.—Rupture of Fallopian tube. "Lancet," April 3, 1880.

5. Duvernoy relates a case of *cyst of the vulvo-vaginal gland*, from which he removed about five grammes of fluid. At the end of a fortnight the cyst had regained its former size. About a month later he injected into it, with a Pravaz syringe, three drops of a ten-per-cent. solution of chloride of zinc. A week afterward, no effect having been produced, six

drops of the solution were injected. There was a little pain for a few days, and the cyst became a little larger and somewhat more tense. In the course of a few weeks it had entirely disappeared. The author briefly refers to other methods of treating these cysts, including simple incision, incision and cauterization, drainage, extirpation, and the injection of iodine, and gives a decided preference to the chloride-of-zinc injection.

6. De Amicis gives brief notes of nine cases of *vulvo-rectal fistula due to abscess of the vulvo-vaginal gland*, and states that he has seen many others. He therefore urges that these abscesses should be treated as carefully as those that occur in the immediate neighborhood of the anus, care being taken to open them early and freely.

14. Courty's article sets forth the *hæmostatic effect of vaginal injections of hot water*, especially as a preventive of hæmorrhage during operations. Whenever it is practicable, he gives the injection a few hours before the operation is to be performed. He quotes Emmet at great length, and agrees fully with him as to the substantial fact that the effect of the hot water is to contract the blood-vessels of the parts; but, while offering no theory of his own, he does not admit Emmet's explanation. He thinks that it is not necessary for the patient to lie on her back when taking the injections. Incidentally, he gives his experience with this measure in other than operative cases, including non-hæmorrhagic affections, and bears testimony to its great value in the treatment of pelvic diseases.

17. Hart attempts to account for the discrepancy between the amount of *distention of the bladder in women* actually found in some cases and the apparent amount. Normally, the empty bladder has practically no vertical diameter, i. e., it is collapsed from above downward; but, from the loose character of its connection with the symphysis pubis, it is capable of assuming quite the opposite form, spreading out beneath the abdominal wall, as it normally does during fœtal and infantile life. When this takes place, a mere sheet of urine may, by reason of its superficial extent, give rise to the supposition that the organ is over-distended. The author suggests that the reason why the bladder, from having been an abdominal organ in early life, becomes a pelvic organ in the adult is, that the growth of the pelvis outstrips that of its contents, so that something additional is needed to fill up the space thus occasioned.

21. In this article on the *treatment of metrorrhagia*, the "post-puerperal form" [the "menorrhagia lochialis" of M'Clintock?] is first considered. It is held to be due to secondary inertia of the uterus, and ergot takes the first place in the treatment. Yvon's solution is preferred, used hypodermically, repeated two or three times a day, if the uterus again relaxes. Quinine is often useful, especially if there be febrile symptoms. If there be congestion the use of ergot should be omitted or postponed, and much benefit will be derived from hot baths (34° C. [= 93·2° F.]) of twenty or thirty minutes' duration, which may be repeated frequently. Other revulsives may be used at the same time, and great service is often rendered by hot-water vaginal injections. Chapman's spinal hot-water bags are also very useful. Retention of portions of the placenta or membranes should be treated with ergot and revulsives. If they are adherent, Pajot's curette is to be used. Hæmorrhage due to traumatic lesions requires local applications of hæmostatics, such as perchloride of iron, etc. If the loss is due to systemic causes, medicines acting upon the plasticity of the blood should be used. As to non-puerperal hæmorrhages, when the flow is due to anæmia, hydro-therapeutics and local refrigeration should be combined with the usual tonic and hæmostatic medication. In the hæmorrhage that sometimes accompanies the onset of febrile diseases, the tampon is specially useful if anything more than ordinary internal treatment seems necessary. Climacteric hæmorrhages, where no lesion can be found to account for them, should not be treated too actively; if we simply keep the flow within bounds, it will soon cease of itself. In hæmorrhage from active uterine congestion the revulsives already mentioned are recommended, and emetics and digitalis are regarded as "too active." Some rebellious cases have yielded readily to a few leeches or the actual cautery applied to the cervix. Ergot should not be used until the foregoing measures have been employed. In cases of passive congestion digitalis may be used, but not unless there is also disease of the heart present, "for it is now demonstrated," says the author, "in spite of Trousseau's opinion, that digitalis does not cause contraction of the uterine muscle." [The manner in which digitalis sometimes checks uterine hæmorrhage is not understood. "Its influence," says West ("Lectures on the Diseases of Women," 4th ed., London, 1879, p. 63), "is not exerted specially through the medium of the circulation."] The curette is recommended, used cautiously, and followed by cauterization, in relapsing cases, even if no vestiges of an old endometritis be discovered. In acute endometritis, digitalis is recommended in doses of from 30 to 50 centigrammes [5 to 8 grains]. Ergot is allowable only when the inflammation is moderate, while the parenchyma is heavy, voluminous, and softened. When the case is verging upon chronicity, local treatment is called for, and the preference is given to intra-uterine injections of tincture of iodine or the solution of perchloride of iron. Extra-uterine inflammation, old or recent, is the only contraindication. If the uterine tissue is softened, ergot and revulsives should first be used. If the flow does not permanently yield to a few injections, fungosities may be suspected. The hypodermic use of ergotine is urged in cases of hæmorrhage dependent on fibrous tumors or mucous polypi, but the author omits to caution against the undue action of ergot, which, by cutting off the nutrition of the tumor, may produce gangrene and septicæmia. The ergot treatment is recommended for cases of cancer also.

25. Duncan, in his article on *intra-uterine menstrual coagula*, expresses his opinion that dilatation of the otherwise healthy unimpregnated uterus, so as to inclose and retain a large clot, is not, as has been particularly stated by Scanzoni, highly improbable; and he gives three reasons for his opinion: 1, the histories (previously published by him) of cases of dilatation with hæmorrhage; 2, the fact that the puerperal uterus is capable of such dilatation; 3, the almost certain occurrence of dilatation of the otherwise healthy unimpregnated uterus without the formation and retention of a clot within it. He is not convinced, however, that the cavity of the body of the uterus may be largely dilated in consequence of stenosis or of flexion. He has, however, frequently seen dilatation without stenosis, and in all the most marked cases of stenosis that he has seen there has been no dilatation. The conscientiousness with which he declines to prop up his opinions with testimony which might well be trusted by those unused to close analysis is to be highly commended.

27. Playfair, in his remarks on *intra-uterine medication*, expresses a doubt as to the existence of sufficient pathological knowledge to justify the division of inflammatory affections of the endometrium into cervical as distinguished from corporeal endometritis, chronic hyperplastic endometritis, hæmorrhagic endometritis, fundal endometritis, cystic metritis, and the like. Affections of this class are more amenable to treatment in women who have been pregnant than in the sterile or the unmarried. In the former, they may generally be traced to imperfect involution of the uterus. Intra-uterine injections are so dangerous that they are clearly not justifiable as an ordinary method of treatment. The suggestion to dilate the cervix before using the injection is not favored, for the dilatation itself is a serious proceeding, never to be lightly undertaken. After many experiments, the author has discarded the practice of inserting sticks or crayons of sulphate of zinc, alum, nitrate of silver, and the like into the cervical canal, and allowing them to remain there. Such methods are far more troublesome to use, more painful to the patient, and less efficacious than the application of fluids by swabbing. He then describes the probes that he has had made for this purpose, which are sufficiently well known. To facilitate the removal of tenacious and adherent secretion, it may be well to moisten with water or glycerine the cotton-wrapped probes that are used to cleanse the canal before applying the medicament. Increasing contraction of the cervical canal is often a sign of improvement. Before resorting to these applications, it is often a matter of moment to prepare the uterus for it by certain preliminary treatment, especially where there is appreciable tenderness of the organ. The application, every night, for a few days, or even a week or two, of a glycerined cotton tampon, frequent hot-water douches, acupuncture, and the application of one or two leeches to the cervix, are very serviceable for this purpose. For the intra-uterine applications, tincture of iodine and a mixture of equal parts of crystalline carbolic acid and glycerine are the safest and most reliable, and he generally uses the latter. It is not necessary to cauterize, but merely to modify the circulation so as to cause a healthy reparative action. Carbolic acid is free from all risk of producing cicatricial contraction, as it never gives rise to an eschar, as nitric acid does. If used too near the menstrual period intra-uterine applications are apt to bring on the flow prematurely, and to make it profuse sometimes, and he therefore limits their use to the first ten days after menstruation, making two applications at intervals of three or four days. In cases occurring after parturition, where the cervical canal is patulous, this course, carried over three or four periods, commonly relieves the sufferings. In nulliparæ, however, where the cervix is conical and the os contracted, the relief is often only temporary. In some cases of this kind division of the cervix is absolutely indicated, as taught by Atthill. The author thinks that nitric acid has no advantage over milder and safer applications in cases characterized by profuse catarrhal discharge, and he apprehends that it may give rise to cicatricial contraction. In obstinate hæmorrhagic cases, however, its superiority is strikingly shown, and he has often seen a single application of it cure cases that had proved rebellious to other applications. He is not convinced that preliminary dilatation of the cervix is essential, but would hesitate to apply the acid unless the cervix were already so patulous that some degree of subsequent contraction would not be a serious matter. He is not sure that the acid possesses any advantage over the dull wire curette, the use of which is painless and often effectual. When judiciously applied in suitable cases, intra-uterine applications are not dangerous.

28. The general drift of Tilt's article on *intra-uterine medication* is against its employment in the ordinary run of cases. He would limit it to: 1. Incoercible blood-loss, resisting milder remedies and menacing life; 2, when life or reason is threatened in other ways than by the amount of the purulent discharge; 3, when it leads, independently of oöphoritis, to an aggravated combination of dysmenorrhœa and menorrhagia, threatening life or reason; 4, membranous dysmenorrhœa of exceptional severity; 5, habitual abortion, independent of syphilis and oöphoritis, and seemingly caused by some morbid condition of the lining membrane of the body of the womb.

47. Lane's *vaginal hysterectomy* was done for recurrent epithelioma. The patient having been placed on her side, the perinæum was retracted with a Sims speculum, the uterus was drawn down with Péan's tenaculum-forceps, and an opening was made into Douglas's cul-de-sac. The fundus uteri was then drawn down through this opening by traction with

the forceps, the organ being made to revolve upon its transverse axis in such manner that the Fallopian tubes and the ovaries were brought down low enough in the pelvis to allow the base of the tubes and the arteries to be tied easily. The ligatures were of strong silken cord, so passed through button-holes in the broad ligament that they could not afterward slip off. This part of the operation occupied fifteen minutes, but the work of separating the uterus from the bladder was long and tedious, and so thin was the remaining vesical wall that at times the luster of the catheter that served as a guide could be seen through it. After the organ had been removed the pelvic cavity was rinsed out with a one-per-cent. solution of carbolic acid, a Nélaton's flexible catheter was placed in the bladder, the pelvic excavation was filled with lint saturated with four-per-cent. carbolized linseed oil, and the abdomen was covered with rubber ice-bags. A drainage-tube was fixed alongside the carbolized lint. No sutures were used. The case did well. The author briefly states his reasons for preferring the vaginal method of hysterectomy, of which this was his second case.

48. Clay gives his experience with *Chian turpentine in the treatment of cancer of the uterus.* From a study of the effects of certain carbo-hydrates administered internally, he thought it probable that a remedy for cancer might be found among them. Various objections arose against all of them, however, except Chian turpentine, which he determined to try at the first opportunity. The first patient to whom it was given was a woman aged fifty-two, with scirrhus of both the cervix and the body of the uterus. Hæmorrhage was excessive, there was agonizing pain in the back and abdomen, and the cancerous cachexia was well marked. Ulceration had advanced so far that the uterine cavity readily admitted three fingers. Six grains of Chian turpentine, with four grains of flowers of sulphur (made into two pills), were ordered to be taken every four hours. No other treatment was directed. In four days the pain was much lessened, and she was in better spirits, but complained of a large amount of discharge. The vagina was found filled with a dirty-white ropy secretion. The os was quite contracted, and would now scarcely admit the finger, and the cancerous infiltration of the cervix was much reduced. The improvement continued. In the sixth week quinine was ordered, in conjunction with the turpentine, but, as it caused nausea, it had to be given up. In the twelfth week the parts felt ragged and uneven, but did not bleed on roughly touching them. Several cicatricial spots were seen. She was almost free from pain, and had had no hæmorrhage. There was no glandular enlargement, and her general health had improved. Notes of three other cases are given, all showing marked improvement under the use of the turpentine; and it is stated that several other cases, including cancer of the breast, the vulva, the stomach, and the abdomen, were showing remarkable benefit under the same treatment. Not more than twenty-five grains of the drug daily can safely be given continuously. The author attributes but little effect to the sulphur, and thinks the turpentine is best given alone. Without affirming that the remedy is a positive cure for advanced cancer, Clay is convinced that, if used steadily for some time, it arrests the progress of the disease and relieves the pain to a greater extent than any other agent; and he thinks it probable that its persistent use may prove an effectual cure. The turpentine may be given in the form of an emulsion: Dissolve one ounce of Chian turpentine in two ounces of pure sulphuric ether; to half an ounce of this ethereal solution add four ounces of solution of tragacanth, one ounce of sirup, forty grains of flowers of sulphur, and enough water to make a sixteen-ounce mixture. The dose of this mixture is one ounce three times a day. On the strength of Professor Clay's reputation serious consideration must be

given to the startling statements in his article, and we can only hope that they may be verified. At all events, judging from the sudden advance in the price of the drug, its virtues are likely to be tested by other observers without loss of time.

51. Kuhn contributes two cases of *hysterectomy by Freund's method.* One was a case of carcinoma of the cervix and body. The patient recovered from the operation, but the disease returned after three months, and proved fatal. The second case also was one of carcinoma of the cervix and body. Death occurred in fifteen hours after the operation.

59. This paper gives a summary of the results in fifteen cases in which *Battey's operation* was performed by Dr. Battey; death resulted in two instances. Of those patients who recovered from the operation, eight were cured (three of hystero-epilepsy, three of oöphoralgia, one of threatened insanity, and one of the effects of occlusion of the vagina and uterus); one was temporarily relieved (of oöphoralgia and coccygodynia [by the removal of one ovary—subsequent incomplete removal of the other ovary did not produce improvement]); one was partially relieved (of hystero-epilepsy); two were not improved (of whom one had oöphoralgia, cellulitis, cystic ovaries, etc., and the other had been temporarily relieved by the removal of one ovary); and one (with "violent menstro-mania") was improving in mind and body, but the date of the operation was too recent for the final result to be determined. The author thinks that, to justify the operation in any given instance, the facts must warrant an affirmative answer to each of these three questions: 1. Is the condition to be remedied a grave one? 2. Is it incurable by other and less radical means? 3. Is it curable by the arrest of ovulation or change of life?

61. Mr. Owen's patient with *rupture of the Fallopian tube* was a woman aged thirty-nine, who had had four children, the youngest being nearly two years old. Her menstruation had always been regular. She menstruated normally in the beginning of December. About the middle of that month she overtaxed her strength in nursing a sick child. Ever after her December menstruation she suffered much from pains in the back and in the stomach. On January 7th she thought her period had come on, but, as the napkin was only slightly discolored, she concluded that it had passed off. On the morning of the 8th she had been "reaching about" a good deal, and suddenly felt "something give" in her right side. She fainted away almost immediately. One faint followed another, and between them she complained of severe pain in the right iliac and hypochondriac regions, not increased on pressure, and was in a state of collapse. Under free stimulation she rallied partially. On the 9th she became unconscious about mid-day, and died soon afterward. At the autopsy the abdomen was found full of thin, pale blood, and from the right side a quart of thick black clots was removed. The ovaries were cystic and atrophied. The left Fallopian tube was small; in the right one, a quarter of an inch from the uterus, was an opening, on its upper aspect, as large as a horse-bean, from which a little fibrinous material was oozing. The tube was everywhere as large as a pipe-stem, but at the opening it was as large as a No. 10 catheter. The uterus was somewhat stained and congested near the tube, and its mucous membrane was much thickened. Careful examination failed to detect an embryo. There was no sign of peritonitis. The author thinks it a plausible theory that she took cold at her December period, which caused inflammation of the tube, possibly ending in abscess, and that the latter was ruptured in consequence of over-exertion.

QUARTERLY REPORT ON OPHTHALMOLOGY AND OTOLOGY.

No. II.

By CHARLES STEDMAN BULL, A. M., M. D.,
SURGEON AND PATHOLOGIST TO THE NEW YORK EYE AND EAR INFIRMARY.

Ophthalmology.

1. Krenchel, W.—Eigenthümlicher Fall von Amblyopie. "Kl. Monatsbl. f. Augenheilk.," Feb., 1880.
2. Emmert, E.—"Auge und Schädel. Ophthalmologische Untersuchungen," Berlin, 1880.
3. Nagel, A.—"Mittheilungen aus der Ophthalmiatrischen Klinik in Tübingen." Erstes Heft, 1880.
4. Trélat.—Ankyloblépharon de la paupière inférieure. "Bull. et Mém. de la Société de Chir.," Jan. 5, 1880.
5. Dianoux-Abadie.—Rapport sur deux mémoires ayant pour objet la substitution de le névrotomie optico-ciliaire à l'énucléation. [Giraud-Teulon, Rapporteur.] "Bull et Mém. de la Société de Chir.," Jan. 5, 1880.
6. Goldzieher, W.—Die sympathische Augenentzündung. "Med.-Chir. Centralblatt," Jan. 9, 1880.
7. Harper, J. E.—The relation of refractive and accommodative errors to defective sight and certain disturbances of the nervous system. "Indiana Med. Reporter," Feb., 1880.
8. Wolfe, J. R.—Clinical lecture on traumatic cataract and other injuries of the eye. "Brit. Med. Jour.," Feb. 14, 1880.
9. Tweedy, J.—On the treatment of diphtheritic ophthalmia by local applications of solutions of quinine. "Lancet," Jan. 24, Feb. 21, 1880.
10. Roberts, J. B.—Traumatic astigmatism. "Med. Gazette," Feb. 21, 1880.
11. Lanng, O. R.—Remarks on common eye troubles. "New Orleans Med. and Surg. Jour.," March, 1880.
12. Lundy, C. J.—Ossification of the ciliary body and choroid. "Med. Record," March 6, 1880.
13. Chisolm, J. J.—A piece of metal twenty-three years in the eye without causing sympathetic ophthalmia. "Boston Med. and Surg. Jour.," March 11, 1880.
14. Dreschfeld, J.—Pathologisch-anatomische Beiträge zur Lehre von der Semidecussation der Sehnervenfasern. "Centralbl. f. prakt. Augenheilk.," Feb., 1880.
15. Schirmer, R.—Ein Mittel, die Chloroformnarkose abzukürzen. "Centralbl. f. prakt. Augenheilk.," Feb., 1880.
16. Fraenkel, G.—Entfernung eines Eisensplitters aus dem Glaskörperraume mittelst Scleralschnittes und Anwendung des Magneten. "Centralbl. f. prakt. Augenheilk.," Feb., 1880.
17. Oeller, J. W.—Contributions to the study of chorio-retinitis pigmentosa. "Arch. of Ophth.," ix, 1.
18. Ely, E. T.—Ophthalmoscopic observations upon the refraction of the eyes of newly born children. "Arch. of Ophth.," ix, 1.
19. Roosa, D. B. St. J., and Ely, E. T.—Clinical contributions. "Archiv. of Ophth.," ix, 1.
20. Reuling, G.—A case of pseudo-cyst of the retina inclosing a foreign body. "Arch. of Ophth.," ix, 1.

21. Chisolm, J. J.—Tetanus terminating fatally from enucleation of an eyeball. "Arch. of Ophth.," ix, 1.
22. Cohn, H.—Comparative determinations of the acuteness of vision and the perception of colors by daylight, gaslight, and electric light. "Arch. of Ophth.," ix, 1.
23. Cohn, H.—Quantitative determination of the color-sense. "Arch. of Ophth.," ix, 1.
24. Bull, C. S.—On the removal of foreign bodies from the eye. "Arch. of Ophth.," ix, 1.
25. Roosa and Ely.—Addendum—a case of supposed amblyopia from quinine-poisoning. "Arch. of Ophth.," ix, 1.
26. Pooley, T. R.—Note to the case of right-sided binocular hemiopia, depending upon a gummy tumor in the left posterior lobe of the brain, published in vol. v, p. 148, of these "Archives." "Arch. of Ophth.," ix, 1.
27. Fernandez, J. Santos.—Gunshot wound of both eyes; absorption of left crystalline lens; recovery. "Arch. of Ophth.," ix, 1.
28. Knapp, H.—On division of the optic and ciliary nerves. "Arch. of Ophth.," ix, 1.
29. Warlomont.—Optométrie et milice. "Annales d'Oculistique," Jan., Feb., 1880.
30. Badal.—Études d'optique physiologique. "Annales d'Oculistique, Jan., Feb., 1880.
31. Hocquard, E.—Anatomie et physiologie pathologique des staphylômes (2ième article). "Annales d'Oculistique, Jan., Feb., 1880.
32. Manolescu, N.—Recherches relatives à l'étude de l'acuité visuelle. Conditions de la visibilité des points et des lignes. "Annales d'Oculistique," Jan., Feb., 1880.
33. Warlomont.—Matériaux pour servir à l'histoire de l'énervation. "Annales d'Oculistique," Jan., Feb., 1880.
34. Hyvernat, J.—Sur un cas de spinthéropie. "Lyon Méd.," Feb. 8, 1880.
35. Massmann.—Ein Holzsplitterchen im Auge. "Deutsche med. Woch.," Feb. 28, 1880.
36. Olin, H.—Glaucoma. "Chicago Med. Times," March, 1880.
37. Pope, B. A.—A brief examination into the comparative merits of some of the operations for the extraction of hard cataract, with remarks on the operations proposed for the relief of certain cases of lamellar or zonular cataract. "Trans. Amer. Med. Ass.," vol. xxx, 1879.
38. Smith, E.—Relief of xerophthalmia by operation. "Trans. Amer. Med. Ass.," vol. xxx, 1879.
39. Williams, E.—Ivory exostosis of the orbit. "Trans. Amer. Med. Ass.," vol. xxx, 1879.
40. Knapp, H.—On cataract extraction. "Trans. Amer. Med. Ass.," vol. xxx, 1879.
41. Calhoun, A. W.—A report of one hundred and eighty-five cataract operations, with some suggestions as to certain modes of operating, after-treatment, etc. "Trans. Amer. Med. Ass.," vol. xxx, 1879.
42. Blitz, A.—Operations for cataract. "Trans. Amer. Med. Ass.," vol. xxx, 1879.
43. Murdock, G. W.—Notes on three cases of severe injury to the eye, treated almost exclusively by rest. "Amer. Jour. Med. Sci.," April, 1880.
44. Risley, S. D.—On the relative value of the sulphates of atropia and of duboisia in ophthalmic practice. "Amer. Jour. Med. Sci.," April, 1880.
45. Heyl, A. G.—Metastatic tenonitis in diphtheria. "Amer. Jour. Med. Sci.," April, 1880.

46. **Chisolm**, J. J.—Sympathetic amblyopia, rapidly destroying sight; prompt relief by neurotomy of the optic and ciliary nerves of the lost eye. "N. Y. Med. Jour.," March, 1880.
47. **Demons**.—Deux observations de kyste congénital du sourcil. "Bull. et Mém. de la Soc. de Chir.," Jan. 5, 1880.
48. **Voorhies**, A. H.—Temporary blindness from quinine. "Trans. Amer. Med. Ass., 1879.
49. **Bracchini**, E.—Sopra un lipoma congenito della congiuntiva. "Bollettino d'Oculistica," anno ii, Num. 5, 1880.
50. **Simi**, A.—È necessario che nelle scuole nôstre l'igiene dell' occhio sia migliorata. "Bollettino d'Oculistica," anno ii, Num. 5, 1880.
51. **Heyl**, A. G.—Remarks on lipæmia retinalis occurring in a case of diabetes mellitus. "Phila. Med. Times," March 27, 1880.
52. **Little**, W. S.—Duboisia; its peculiar and general effect compared with atropia. "Phila. Med. Times," March 27, 1880.
53. **Neftel**, W. B.—Ueber die galvanische Behandlung der Cataracta incipiens. "Arch. f. path. Anat. u. Phys. u. klin. Med.," Bd. 79, Heft 3.
54. **Jacobson**, J.—Mittheilungen aus der Königsberger Universitäts-Augenklinik, 1877–'9. Berlin, 1880.
55. **Trompetter**, J.—Ueber die Bestimmung der quantitativen Lichtempfindung kataraktöser Augen. "Kl. Mon. f. Augenheilk.," March, 1880.
56. **Dor**.—Une nouvelle méthode de traitement de la conjonctivite blennorrhagique. "Lyon Méd.," March 7, 1880.
57. **Abadie**, C.—De la section extraoculaire des nerfs optique et ciliaires substituée à l'énucléation du globe oculaire. (Travail communiqué à la Soc. de Chir. dans la séance du 19 Nov., 1879.) "Gaz. Hebdom.," March 12, 1880.
58. **Dor**.—Quelques détails anatomo-pathologiques sur un cas de cataracte congénitale. (Soc. des Sci. Méd. de Lyon.) "Lyon Méd.," March 14, 1880.
59. **Fernandez**, J. S.—Un fenómeno observado despues de la enucleacion del globo ocular. "Crón. Med.-Quir. de la Habana," March, 1880.
60. **Hill**, E. W.—Nervous and neuralgic affections symptomatic of defect of the eye. "Med. and Surg. Reporter," April 3, 1880.
61. **Macfarlan**, E.—A new operation for symblepharon and permanent cure. "Med. Record," April 10, 1880.
62. **Keyser**, P. D.—A case of total symblepharon of the upper and lower lids of both eyes—operation on one with good recovery of vision. "Phila. Med. Times," April 10, 1880.
63. **Buller**, F.—The use of eserine in ophthalmic practice. "Montreal Genl. Hosp. Rep.," vol. i, 1880.
64. **Kretschmer**.—Keratitis neuroparalytica und Panophthalmitis nach einer Neurectomie des Nerv. infraorbitalis. "Centralbl. f. prakt. Augenheilk.," March, 1880.
65. **Krückow**.—Zwei Fälle von sympathischen Cataracten. "Centralbl. f. prakt. Augenheilk.," March, 1880.
66. **Vogler**, E. — Ein Fall von einem Fremdkörper im Augeninnern. "Centralbl. f. prakt. Augenheilk.," March, 1880.
67. **Dor**.—Note sur les nerfs ciliaires. "Lyon Méd.," March 14, 1880.
68. **Hällsten**, K.—Die dioptrische Fähigkeit in centrirten Systemen: mit besonderer Rücksicht auf die dioptrische Fähigkeit und die Accommodationsbreite des Auges. "Arch. f. Anat. u. Phys., phys. Abtheilung," 1 und 2 H., 1880.
69. **Duval**, M., et **Laborde**, J. V.—De l'innervation des mouvements associés des globes oculaires, études d'anatomie et de physiologie expérimentale. "Jour. de l'Anat. et de la Phys.," Jan., Feb., 1880.

70. Thin, G.—Note on the ganglion-cells of the elephant's retina. "Jour. of Anat. and Phys.," xiv, Part 3, April, 1880.
71. Galezowski.—Études sur les cataractes et sur leur traitement. "Recueil d'Ophthal.," March, April, May, 1880.
72. Le Guaita.—L'ésérine dans les kératites et le glaucome. "Recueil d'Ophth.," March, 1880.
73. Mengin.—Troubles et affections oculaires d'origine lachrymale. "Recueil d'Ophth.," March, 1880.
74. Parent.—Des reflets et des scotomes dans l'examen ophthalmoscopique. "Recueil d'Ophth.," March, 1880.
75. Godo.—De l'herpès fébrile de la cornée. "Recueil d'Ophth.," March, April, May, 1880.
76. Redard, P.—Sur un cas rare de lymphadenome périoculaire et de la conjonctive. "Recueil d'Ophth.," April, 1880.
77. Parent.—Des séries de verres dans les ophthalmoscopes à réfraction. "Recueil d'Ophth.," April, 1880.
78. Lucas-Championnière.—Méthode antiseptique dans la chirurgie oculaire. "Recueil d'Ophth.," April, 1880.
79. Minor, J. L.—Three anomalous cases of glaucoma. "Virg. Med. Monthly," April, 1880.
80. Berger.—Blépharoplastie par la méthode italienne. "Bull. et Mém. de la Soc. de Chir.," April 5, 1880.
81. Howe, L.—Sarcomatous tumors in the orbit. "Buffalo Med. and Surg. Jour.," April, 1880.
82. Seguin, E. C.—On the coincidence of optic neuritis and subacute transverse myelitis. "Jour. of Nerv. and Mental Dis.," April, 1880.
83. Ott, I., and Prendergast, M. T.—The rapidity of perception of colored lights. "Jour. of Nerv. and Mental Dis.," April, 1880.
84. Seely.—The parasitic theory in ophthalmology. "Cincinnati Lancet and Clinic," April 17, 1880.
85. Fröhlich, C.—Ueber Antisepsis bei Augenoperationen. "Klin. Monatsbl. f. Augenheilk.," April, 1880.
86. Trompetter, J.—Ueber Choroiditis nach Febris recurrens. "Klin. Monatsbl. f. Augenheilk.," April, 1880.
87. Fuchs, E.—Dermoid der Cornea. "Klin. Monatsbl. f. Augenheilk.," April, 1880.
88. Fuchs, E.—Vollständige Sequestration der Cornea nach einfacher Linearextraction. "Klin. Monatsbl. f. Augenheilk.," April, 1880.
89. Carreras. — Geheilte Strychninvergiftung. "Centralbl. f. prakt. Augenheilk.," April, 1880.
90. Samelsohn.—Strabismus intermittens. "Centralbl. f. prakt. Augenheilk.," April, 1880.
91. Magnus, H. — Mangel der unteren Thränenpunkte. "Centralbl. f. prakt. Augenheilk.," April, 1880.
92. Jacob, E. H.—Cases of nervous disease presenting ophthalmoscopic phenomena. "Lancet," March 20, 27, 1880.
93. Merrill, C. S.—Glioma of the retina. "Med. Annals," April, 1880.
94. Dickinson, W.—Pathological relation of certain ophthalmic phenomena to tabes dorsalis (locomotor ataxia, posterior spinal sclerosis, etc.). "Alienist and Neurologist," April, 1880.
95. Critchett, G.—A case of gonorrhœal ophthalmia, with some novel suggestions as to treatment. "Lancet," April 3, 1880.
96. Javal, E.—Hygiène de la vue. "Tribune Méd.," April 11, 1880.
97. Snell, S.—Case of ectropion treated by a naso-buccal flap; and other cases. "Lancet," April 17, 1880.

98. Sichel.—Un cas de syphilis conjonctivale. "Gaz. Hebdom.," April 23, 1880.
99. Landesberg.—On the occurrence of sympathetic ophthalmia, consequent upon linear extraction of cataract. "Med. and Surg. Reporter," May 1, 1880.
100. Gruening, E.—On the removal of particles of steel or iron from the vitreous chamber by means of magnets. "Med. Record," May 1, 1880.
101. Cheatham, W.—Can the progress of cataract be stayed? "Louisville Med. News," May 1, 1880.
102. Bader, C.—A new treatment of gonorrhœal ophthalmia. "Lancet," May 1, 1880.
103. Lane, L. C.—Ligation of the carotid artery for glaucoma, with improved vision. "Pacific Med. and Surg. Jour.," May, 1880.
104. Hotz, F. C.—The value of salicylic acid in the treatment of rheumatic diseases of the eye. "Chicago Med. Jour. and Examiner," May, 1880.
105. Higgins, C.—Atrophy of the optic nerves occurring about puberty. "Med. Times and Gaz.," April 24, 1880.
106. Ladenburg, A.—Sur les alcaloïdes naturels et mydriatiques de la belladonna, du datura, de la jusquiame, et de la duboisia. "La France Méd.," April 21, 1880.
107. Nettleship, E.—Sympathetic ophthalmia setting in three weeks after enucleation of an eyeball. "Med. Press and Circular," April 14, 1880.
108. Cohn, H.—Ueber hypnotische Farbenblindheit mit Accommodationskrampf, und über Methoden nur das Auge zu hypnotisiren. "Wien. med. Presse," March 28, 1880.
109. Weber, F.—Ueber die Amaurose im Wochenbett. "St. Petersb. med. Woch.," March 15, 22, 1880.
110. Eger.—Beitrag zur Pathologie des Morbus Basedowi. "Deut. med. Woch.," March 27, 1880.
111. Cohn, H.—Das Verschwinden der Farbenblindheit beim Erwärmen eines Auges. "Deut. med. Woch.," April 17, 1880.
112. Da Costa, J. M.—A case of exophthalmic goître, with remarks on its etiology, pathology, and treatment. "Boston Med. and Surg. Jour.," April 8, 1880.
113. Hemingway, S.—A handy ophthalmoscopic screen. "Med. Record," April 10, 1880.
114. Ryerson, G. S.—Irideremia, or total absence of the iris. "Canada Lancet," May 1, 1880.
115. Bucklin, C. A.—Convergent squint—causes, results, treatment. "Med. Record," May 22, 1880.
116. Neftel, W. B.—The cure of cataract by electricity. "Med. Record," May 22, 1880.
117. Knapp, H.—The cure of cataract by electricity. "Med. Record," May 22, 1880.
118. Agnew, C. R., and Webster, D.—The alleged cure of cataract by electricity. "Med. Record," May 29, 1880.
119. Abadie.—De la tenotomie partielle des muscles de l'œil pour combattre le développement de la myopie progressive. "Bull. et Mém. de la Soc. de Chir.," May 5, 1880.
120. Beauregard, H.—Étude du corps vitré. "Jour. de l'Anat. et de la Phys.," No. 3, May, June, 1880.
121. Samelsohn.—Genese des Microphthalmus congenitus. "Centralbl. f. die med. Wiss.," April 24, May 1, 1880.

122. Duval, M.—Recherches sur l'origine réelle des nerfs craniens. "Jour. de l'Anat. et de la Phys.," No. 3, May, June, 1880.

123. Wolfe, J. R.—A bleeding tumor of the iris. "Med. Times and Gaz.," May 8, 1880.

124. Courserant, H.—De la cautérization ignée en thérapeutique oculaire. "La France Méd.," April 28, 1880.

125. Rosmini, G.—Rendiconto clinico dell' Istituto optalmico di Milano per il quinquennio 1874–'78. "Gaz. Med. Ital. Lombardia," March 13, 1880.

126. Parent.—Compte-rendu de la clinique de Galezowski. "Recueil d'Ophthal.," May, 1880.

127. Megui.—De la paracentèse de la chambre antérieure comme traitement des abcès et ulcères de la cornée. "Recueil d'Ophth.," May, 1880.

128. Galezowski.—Traitement de la sclérite. "Recueil d'Ophth.," May, 1880.

129. Parent.—Description d'un nouvel œil artificiel. "Recueil d'Ophth.," May, 1880.

5. This is a report by Giraud-Teulon, as chairman of a committee appointed to consider the ideas advanced in two papers by Dianoux and Abadie on *optico-ciliary neurotomy as a substitute for enucleation.* The report considers the methods employed by the two gentlemen, which differ somewhat in detail. Dianoux first divided the conjunctiva and capsule of Tenon between the internal and the inferior recti, and then divided the tissues next the eye, as in strabotomy. He next introduced his little finger through the wound until he touched the optic nerve, and then divided this nerve and the ciliary nerves on the finger as a guide. Next, he denuded the posterior part of the eye with scissors, and supplemented this by the introduction of a strabotomy-hook. The eye was then closed by a simple dressing. Abadie opens the conjunctiva on the outside, divides the tendon of the external rectus, and thus has a larger space to work in. The eye is rotated inward and the posterior pole brought into view. The optic nerve and *all* the ciliary nerves are then divided, close to the eye, with great care. The eye is then replaced, and the muscle stitched in place again. Giraud-Teulon compares the favorable with the unfavorable results of the operation. There is usually but little constitutional disturbance, the sensibility of the cornea is immediately extinguished, the pain ceases. In 34 cases out of 39 the desired results were obtained. The unfavorable results are: in rare cases, an absolute divergent squint, from the wounding of the internal rectus; primary or secondary hæmorrhage behind the eye, producing exophthalmus and requiring a subsequent enucleation; and occasionally a sudden return of the pain and irritation. Dianoux and Abadie claim: 1st. That the operation is in itself not severe. 2d. That the eye preserves its mobility, nutrition, shape, and transparency. 3. That, the pain and irritation being stopped, all sympathetic or reflex action is also arrested or prevented. These are considered in turn by Giraud-Teulon, who rejects them all, so far as the great value claimed for them is concerned. He still maintains the superiority of enucleation, deeming that any element of uncertainty in it attaches also to optico-ciliary neurotomy, and asserting that it is easier of execution, is a simple operation, instead of a complicated one, and gives greater security for the future. The report is a long, able, and perfectly fair and judicial discussion of the various arguments for and against the operation, and is worthy of being read in its entirety and with close attention.

9. Tweedy was induced to try *quinine locally in diphtheritic conjunctivitis,* from its reported antiphlogistic properties. Binz says it retards the germination of protoplasm, and checks the vital amœboid movements and consequent migration of leucocytes. In this variety of conjunctivitis the object of treatment is to arrest the germination of corneal protoplasm and the immigration of the leucocytes. In the two cases reported the fatal progress of the disease was speedily arrested by the local application of a three-grain solution of quinine, and good vision was restored after all hope had been given up. In three other cases, treated by his colleagues in the same way, perfect recovery ensued. Another effect of the quinine was the prevention of the facile putrefaction of the pseudo-membranes.

16. Fraenkel's patient with a *foreign body in the eye* was a machinist, aged sixteen, with a wound in the sclero-corneal margin, six mm. long, in the lower and outer quadrant. The ophthalmoscope gave no assistance in deciding as to the presence of a foreign body, owing to the existence of a large blood-clot in the vicinity of the wound. The lens was uninjured. The prolapsed iris was excised, and the eye was bandaged. No inflammatory symptoms appeared, but a diffuse opacity of the vitreous was soon seen, and a defect in the field upward and inward showed a detachment of the retina downward and outward. The employment of a permanent Janin's magnet did not produce any evidence of the presence of a foreign body. Nearly a month after the accident, Dreschfeld recognized in the equatorial region, below, a large splinter of iron. He made an incision through the sclera in the lower and outer quadrant, 10 mm. long, and gave exit to some fragments of inflammatory exudation, and afterward to some dark blood. He then introduced a Janin's magnet into the lips of the wound, and the foreign body was immediately drawn out, with scarcely any loss of vitreous. The wound healed readily, the retina became reattached, and, though the vitreous opacities remained at the last observation, the patient had $V = \frac{6}{18}$ (Schweigger), the eye being astigmatic.

21. Chisolm's case of *tetanus after enucleation of the eye* was in a woman, aged seventy-one, who had a malignant, bleeding tumor of the anterior part of the eyeball, which he enucleated with ease. The orbital tissue proved not to be involved, and, beyond a hæmorrhage from the socket, the case showed nothing abnormal. After the styptic dressing, the patient progressed about as usual, but on the fifteenth day sore throat set in, followed by stiffness in the jaw on the second day after, and by well-marked lockjaw on the third. She had choking paroxysms, but no chest-constriction. Opisthotonos supervened on the seventh day of the attack, and she died on the eighth day, or twenty-three days after the enucleation.

28. Knapp raises the question whether the severed ciliary nerves will not reunite after *optico-ciliary neurotomy*, for it is well known that this takes place in other nerves. He thinks it possible that, where the eye is not enucleated, the retraction of the orbital tissues is to a great extent prevented by the recti muscles, which still hold their normal relation to the eyeball. He thinks that the sensibility of the cornea should be tested not only immediately after the operation, but also months and even years afterward, in order to see whether the nervous conduction has remained permanently interrupted, or has in some degree been reëstablished. He prefers doing the operation without detaching a muscle, and thinks that the nasal side of the globe affords the easiest and nearest approach to the optic nerve; for on the temporal side there is a longer path, and also the insertion of the two oblique muscles, which are sometimes difficult to avoid, and which have been accidentally divided in some cases.

29. Warlomont discusses in a preliminary manner in this paper the hitherto neglected *examination of the eyes of soldiers, with special reference to optometry*. As chairman of a committee appointed by the Belgian Government, he drew up a report, the main features of which are embodied

in this paper. Up to this period myopia was the only error of refraction recognized by the authorities as exempting from military duty. The committee added hypermetropia and astigmatism, and recommended that cases of ametropia, duly recognized and of the degree necessary to exempt from military service, should be placed among the incurable infirmities, and that the discharge or exemption should be immediate and final. The committee also recommended that the use of spectacles should be permitted in the army as an experiment, and that the maximum limit of myopia allowed in the army should be fixed at five dioptrics. In testing the vision, the committee advised the use of Loiseau's optometer, and figures of a cross, a lozenge, a heart, and a spade, instead of letters.

37. The object of Pope's paper is to advocate the performance of *the large-corneal-flap-operation for hard cataract* and its modifications, which he thinks offers the most satisfactory solution of the hard-cataract problem. He also bears testimony to the superiority, in his own practice, of the sclero-corneal flap operation, with iridectomy, over all other operations.

40. This is a report compiled by Knapp from the results of 916 *cataract extractions* done between 1862 and 1879. Of these, 140 were done by the flap-section, in which the results were: good, 116=82·9 per cent.; moderate, 5=36 per cent.; failure, 19=13·5 per cent. Modified extractions, which included the operations of von Graefe, Jacobson, and Mooren, were done in 735 cases. The results here were: good, 635=86·6 per cent.; moderate, 54=7·3 per cent.; failure, 46=6·1 per cent. Linear extraction was done in 41 cases. The results were: good, 38=92·7 per cent.; moderate, 0=0 per cent.; failure, 3=7·3 per cent.

44. Risley's conclusions as to *the comparative value of atropia and duboisia* will not generally be accepted, especially the last: that in the treatment of inflammations of the eye duboisia is quite as useful as atropia, and may therefore be used as a substitute.

48. Voorhies's patient with *temporary blindness from quinine* was a woman, aged eighteen, who had taken within three days, by the stomach and the rectum, more than 1,300 grains of quinine. On the morning of the second day she was perfectly blind. The hearing was but slightly impaired. There was marked paleness of the conjunctiva; the pupils were normal, T+1. There was anæsthesia of the cornea. Light was not perceived. The optic disk was perfectly white, without a trace of any retinal vessels. The choroidal vessels were empty. The retina was yellow. Nitrite of amyl was administered by inhalation, but produced no effect on the retinal circulation. It was repeated at intervals during four days, but produced no effect. Strychnia was used hypodermically until gr. ¼ was given three times a day, but no improvement was noticed till the tenth week, when she began to perceive light from the ophthalmoscopic mirror. From this time vision very slowly improved until she could read Jaeger No. 1. The disk at the last visit was still white, with no trace of the central artery, except a small twig. The field of vision was greatly contracted.

56. Dor recommends the use of *benzoate of soda in purulent conjunctivitis*, following out the idea of Graham Brown that it is a very energetic disinfectant. He uses it as a disinfectant solely in solutions of one to twenty, and he employs as a curative application a solution of tannin (1–10). His individual experience, however, is based on a single case, and hence is not of any great value.

57. Abadie gives the credit of first suggesting the operation of *optico-ciliary neurotomy* to Rondeau, who spoke of it, in his thesis on sympathetic ophthalmia, in 1866. Abadie has done it in three cases of total loss of sight, but with clear corneæ, in which the corneæ remained clear in spite of the anæsthesia following the operation. He has done it in cases of painful stump, and thus enabled the patient to wear an artificial eye. He operates by dividing the external rectus first, then cutting the optic nerve with scissors, and then, reversing the eyeball as far as possible, dividing all the ciliary nerves close to the sclerotic. The eyeball is then replaced in its normal position, the wound in the conjunctiva and the divided external rectus are united by the same suture, and a bandage is applied. Abadie is positive that, in eyes that are not deformed and in which the cornea is tolerably well preserved, the operation can not possibly do any harm.

64. *Neuroparalytic keratitis and panophthalmitis from division of a terminal branch of the trigeminus* is a rare accident. Kretschmer's patient was a soldier who had long suffered from severe neuralgia of the infra-orbital nerve. The nerve was exposed at the infra-orbital foramen and drawn out, a piece was excised, and the central end was then cauterized. An ulcer formed on the cornea the next day, and spread rapidly in spite of all methods of treatment, including a protective bandage, and in eight days the eye was lost by panophthalmitis, which was followed by orbital cellulitis. Kretschmer explained the process as a reflex action of the trigeminus upon the optic nerve.

68. This was a case of *foreign body in the eye*, in which a futile effort was made to remove it by the electro-magnet. As the ciliary region was very painful, it was decided to perform optico-ciliary neurotomy. In attempting this, the scissors struck against a piece of metal in the optic nerve, and the operation was then changed to enucleation. The piece of iron was found imbedded in the posterior part of the eyeball, one jagged end projecting between the sheath of the optic nerve and the nerve itself, and the other through the sclera, several millimetres from it. When the eye was cut open, the piece of metal was found so firmly imbedded as to resist strong traction with the forceps for its removal.

73. Mengin carefully epitomizes *the complications that may arise from alteration of function in the lachrymal passages*, dividing them into two classes. When there is an obstruction to the passage of the tears, the latter become neutral, and act as an irritant in the conjunctival sack, and cause a new overflow of tears. This lachrymation is the earliest symptom of the first class, and is followed by a sense of the presence of some foreign body beneath the lids. This is succeeded by a conjunctivitis, which in its turn brings a marginal blepharitis, and in many instances an obstinate blepharospasm. If the patient is of advanced years, ectropium is frequently observed in the lower lid, with a more or less extensive superficial keratitis. Finally there appear the symptoms of dacryocystitis and stricture of the nasal duct. The second class of complications consists solely of subjective symptoms, the earliest being photopsia and phosphenes, photophobia and monocular diplopia, due to the prismatic effect of the layer of tears in the cul-de-sac, and reaching over upon the cornea. He includes also in this class accommodative asthenopia, which is of doubtful propriety.

75. *Febrile herpes of the cornea* is a new name to American ophthalmologists. The symptoms, according to Godo, are as follows: the patient is attacked with a sore throat or a slight bronchitis, with chilly feelings and a sense of malaise. The tongue is coated, there are marked thirst, nausea, and occasionally vomiting. The pulse becomes increased in frequency, but there is very little rise in temperature. The most marked symptom is the headache, which is general, and may be continuous or remittent. These symptoms last three or four days, and then cease completely, to be followed almost immediately by a pricking sensation in the eye, and the rapid development of all the local signs of corneal herpes.

78. Parent's article is mainly remarkable for the omissions, chief

among which is the absolute failure to make any mention of Loring's *refraction-ophthalmoscope*, which is the equal of any of the various instruments described, and better than most of them; and its workmanship is superior to anything yet put on the market. He has modified his own ophthalmoscope by adding a ring of a diameter of 38 mm., upon which is fixed eccentrically a disk containing ten concave cylindrical glasses, running from D. 0·5 to D. ·6. The zero of this wheel has the shape of a triangular sector, which admits of the reading of the spherical glasses placed beneath. For the determination of myopia and hypermetropia without astigmatism, the cylinders are placed with their axes vertical. Whether this instrument will admit of determining in the erect image the degree of astigmatism as easily as that of simple myopia and hypermetropia, the inventor claims can only be determined by continued trial. The combination of three disks, rotating in a concentric manner, must certainly make a somewhat heavy and clumsy instrument.

78. Lucas-Championnière advises a modification of the *antiseptic method in operations about the eye.* The instruments, the sponges, and the hands of the operator and assistants are to be washed in strong solutions—the former in alcohol, the latter in water strongly impregnated with phenol. A concentrated solution of boracic acid should be used upon the eye and its vicinity. As a dressing, he advises borated lint or cotton and cotton pads covered with vaseline. If it is a case of enucleation or of blepharoplasty, phenol should replace boracic acid. For small wounds in the lids he recommends a borated ointment.

84. Seguin reports three cases of *optic neuritis with transverse myelitis* —one of Erb's and two observed by himself. In Erb's case the right half of the spinal cord contained most of the lesions, and there was reported slight optic neuritis, which ended in atrophy and slight concentric limitation of the field of vision. In Seguin's first case the posterior gray matter was chiefly involved, and in the right eye there was neuritis descendens and a curious and irregular defect in the field of vision. In his second case, Seguin thinks, the entire structure of the cord was slightly affected. There was an œdematous condition of the right optic disk, with indistinct outlines, and a slight nystagmus of the right eye. In all three cases the spinal lesion was recovered from.

86. *Choroiditis after relapsing fever* is not a very rare complication. During the epidemic of this disease in Breslau in 1879, accurate observations were made on 325 patients, and choroiditis was observed in 21 cases, or about 6 per cent. It was of the acute inflammatory character, the ciliary body being also involved. Hypopyon was often present without any iritis. Vitreous opacities were present in every case. The vision was materially affected from the beginning, and the light-perception was notably diminished. In all cases there was a peripheral limitation of the field of vision, the defect being in places sector-like. The course was generally favorable, the duration being from a month to a month and a half.

90. This case was one of *intermittent convergent squint*, of strictly tertian character, occurring in a girl of six years of age. There was slight corneal opacity in both eyes and a hypermetropia of 1·25 D. On the intervening days there was never even the slightest degree of squint, though the case was carefully watched for a number of weeks. Three years later the squint had lost its strictly intermittent type, the hypermetropia had disappeared (*sic*), and vision was R. E. $\frac{20}{50}$, L. E. $\frac{20}{40}$. Long-continued treatment with quinine and arsenic had produced no effect on the periodicity of the early-squint.

95. In a case of *gonorrhœal conjuncticitis*, in a child aged two and a half years, Critchett divided the upper lid completely in a vertical direction, from the ciliary margin to the margin of the eyebrow. He then separated the two angles of the divided tarsus, and fixed them with fine sutures to the skin of the eyebrow. The immediate effect was to diminish the redness and swelling of the lid and conjunctiva. The whole surface of the conjunctiva was then painted three times a day with a thirty-grain solution of silver nitrate, and the eye was frequently cleansed with a ten-grain solution of alum. At the end of six weeks the edges of the divided lid were freshened, and brought together with sutures. Union occurred with very little deformity, and the functions of the lid were well performed.

96. In this lecture, delivered by Javal at the Sorbonne, he considers very practically *the care of the eyes*. He first cautions against the habit of reading continuously, and speaks of the fatigue of the retina brought on by the production of accidental images. The intensity of these images can be diminished by changing the attitude in reading, and by not holding the book immovable. Javal deprecates strongly the glaring contrast between the black print and white paper, and advocates the employment of yellow paper. He also speaks strongly against what he calls the "deplorable minuteness" of the characters employed in books for children. Myopia, hypermetropia, presbyopia, and astigmatism are considered from their practical side, and Javal concludes his paper with the strong and valid claim that the science of ophthalmology is twenty years in advance of general medicine.

98. Sichel's paper shows an unfortunate ignorance of the literature of *conjunctival syphilis*. During the last few years a number of cases of primary lesion and late manifestations of syphilis of the conjunctiva have been reported, both in this country and in Germany. Sichel's case was an ulcerated papule of the ocular conjunctiva.

100. Gruening presents a *magnet for the removal of particles of steel or iron from the vitreous humor*, which is the result of his experiments in concentrating the greatest possible magnetic polarity in the least possible dimensions. The instrument, as finally constructed, consists of a number of magnetized steel rods placed parallel to, and at a little distance from, each other, the ends of which are fitted into iron caps; one of these caps is provided with a delicate point of malleable iron, 32 mm. long, 1 mm. wide, and 0·3 mm. thick, which is capable of sustaining a weight of 15 grammes. The article is illustrated with three woodcuts, representing different forms of the instrument.

102. Bader employs for *gonorrhœal ophthalmia* an ointment of acid nitrate of mercury, gr. 1; daturine, gr. ¼; vaseline, ℥j. He applies it on a brush beneath the upper lid every day, without everting the lid, and then binds up both eyes with lint, covered with the ointment, for three hours. The bandage is then removed, and the eye cleansed. The use of the bandage on the suppurating eye we believe to be bad in principle, and therefore not to be indorsed. In this disease cleanliness is as important as anything else, and hence the eye should not be closed, even for three hours. The treatment lasted in one case six weeks, in another case two weeks, in a third case four weeks, and in a fourth case ten days.

111. Cohn reports three cases of *congenital color-blindness* which yielded to the mesmeric state. He finds that one eye can easily be mesmerized by covering the other with the warm hand or a warm cloth, and making the patient fix the uncovered eye steadily upon some object. He asserts that all color-blind persons are mediums, and may easily be mesmerized!

126. At Galezowski's clinic *eczema of the eyelids* is treated by removng the scabs, and then painting the entire surface with a strong solution of silver nitrate, or applying the mitigated stick. This is regarded as better than any dry or astringent application. In *granular conjunctivitis* the excision of the cul-de-sac is advised as shortening the treatment, in spite of the danger of producing an entropium. In operating for *cataract*, Galezowski makes a corneal flap near the sclerotic, occupying the superior third of the cornea, and combined with an iridectomy; and the capsule is opened with the knife immediately after the puncture. After the operation, dressings with boracic acid (1 to 100) are applied, which are removed twenty-four hours after, and, if the anterior chamber is reëstablished, the bandage is discontinued, except during the night.

OTOLOGY.

1. TURNBULL, L.—The mastoid region and its diseases, with illustrative cases. "St. Louis Med. and Surg. Jour.," Feb. 20, 1880.
2. DALBY, W. B.—Contributions to aural surgery. "Lancet," Feb. 21, 1880.
3. ROOSA, D. B. ST. J.—On the evil consequences of neglected colds in the head. "Med. Gazette," Feb. 21, 1880.
4. THOMAS, C. H.—Researches on hearing through the medium of the teeth and cranial bones. "Phila. Med. Times," Feb. 28, 1880.
5. HARTMANN, A.—Report of the proceedings of the section of otology at the fifty-second meeting of the German Association of Physicians and Naturalists at Baden-Baden, Sep., 1879. "Arch. ot Otology," ix, 1.
6. ROOSA, D. B. ST. J., and ELY, E. T.—Clinical contributions to otology. "Arch. of Otology," ix, 1.
7. STEINBRÜGGE, H.—Cholesteatoma of the right temporal bone, perforating into the region of the semicircular canals.—Cerebral abscess.—Autopsy. "Arch. of Otology," ix, 1.
8. MOOS, S.—Extirpation of the entire malleus, together with a polypus springing from its manubrium. "Arch. of Otology," ix, 1.
9. MOOS, S.—Surprisingly increased acuteness of hearing for low tones in a case of paralysis of the right facial nerve. "Arch. of Otology," ix, 1.
10. MOOS, S.—A case of loss of taste after extirpation of a polypus springing from the region of the stapes. "Arch. of Otology," ix, 1.
11. POOLEY, T. R.—A contribution to the pathology of the organ of hearing. "Arch. of Otology," ix, 1.
12. HARTMANN, A.—A case of round-cell sarcoma originating in the tympanic cavity. "Arch. of Otology," ix, 1.
13. HARTMANN, A.—Brief remarks on the affections of the auditory organ occurring in typhus fever. "Arch. of Otology," ix, 1.
14. BRUNNER, G.—On subjective noises in the ear. "Arch. of Otology," ix, 1.
15. TURNBULL, C. S.—The new folding dentaphone. "Arch. of Otology," ix, 1.
16. KNAPP, H.—Some observations concerning the value of the audiphone. "Arch. of Otology," ix, 1.
17. KNAPP, H.—On disease of the mastoid process. "Trans. Amer. Med. Assoc.," vol. xxx, 1879.
18. GUYE.—Sulla vertigine di Ménière. "Giorn. Internaz. delle Sci. Med.," N. S., anno i, fasc. 10, 11.
19. DEUTSCH, J.—Winke zur Diagnose der Taubstummheit bei Kindern für Aerzte, Eltern und Lehrer.—Fortsetzung. "Med.-chir. Centralbl.," Jan. 9, 1880.
20. BLITZ, A.—Operations for mastoid disease. "Trans. Amer. Med. Assoc.," 1879.
21. GARDINER-BROWN, A.—Aural notes. Ivory exostosis deeply seated in external auditory meatus. "Lancet," March 13, 1880.

22. Turnbull, L.—Deafness the result of sympathy between the ear, teeth, and mouth. "Independent Practitioner," March, 1880.
23. Baratoux, J.—Des affections auriculaires, et de leur rapport avec celles de l'utérus. "Tribune Méd.," March 21, 28, 1880.
24. Andrews, J. A.—An instrument for making applications of medicated fluids and powders to the middle ear. "Arch. of Med.," April, 1880.
25. Holmes, E. L.—The audiphone and kindred instruments. "Chicago Med. Jour. and Exam.," April, 1880.
26. Burnett, S. M.—Objective Wahrnehmung von Tönen im Ohr in Folge von willkürlicher Contraction der Tubenmuskeln. "Zeitschr. f. Ohrenheilk.," ix, 1.
27. Hackley, Chas. E.—Ueber die Anwendung des Toynbee'schen künstlichen Trommelfelles. "Zeitschr. f. Ohrenheilk.," ix, 1.
28. Roosa, D. B. St. J.—Ein Fall von acuter entzündung des mittleren Ohres combinirt mit Entzündung der Nackenmuskeln und Lähmung der Gesichtsnerven der leidenden Seite. "Zeitschr. f. Ohrenheilk.," ix, 1.
29. Bürkner.—Zur Casuistik der traumatischen und entzündlichen Mittelohraffectionen. "Arch. f. Ohrenheilk.," xv, 4.
30. Blau.—Beobachtungen von Erkrankung des Labyrinths. "Arch. f. Ohrenheilk.," xv, 4.
31. Kiesselbach.—Beitrag zur normalen und pathologischen Anatomie des Schläfenbeins. "Arch. f. Ohrenheilk.," xv, 4.
32. Küpper.—Ueber Pulsationen am Trommelfell. "Arch. f. Ohrenheilk.," xv, 4.
33. Lucae.—Die bei Schwerhörigen zu beobachtende gute Perception der tieferen musikalischen Töne und die physiologische und diagnostische Bedeutung dieser Erscheinung. "Arch. f. Ohrenheilk.," xv, 4.
34. Jacoby.—Zur Casuistik der primären und secundären Periostitis und Ostitis des Processus Mastoideus. "Arch. f. Ohrenheilk.," xv, 4.
35. Blake, C. J.—On the occurrence of exostoses within the external auditory canal in prehistoric man. "Amer. Jour. of Otology," April, 1880.
36. Greene, J. O.—Phlebitis of the mastoid emissary vein from phlebitis of the lateral sinus; death from pyæmia; autopsy. "Amer. Jour. of Otology," April, 1880.
37. Spear, E. D., Jr.—Clinical observations. "Amer. Jour. of Otology," April, 1880.
38. Mosher, E. M.—A case of purulent inflammation of the middle ear. "Amer. Jour. of Otology," April, 1880.
39. Sexton, S.—Hearing by aid of tissue-conduction. The mouth-trumpet and the audiphone. "Amer. Jour. of Otology," April, 1880.
40. ———.—Die Ménière'sche Krankheit. "Med.-chir. Centralbl.," March 12, 26, 1880.
41. Mettenheimer, C.—Kiemenfistel am äussern Ohr. "Memorabilien," March 31, 1880.
42. Weber-Liel.—Zur Abortivebehandlung der furunkulösen Entzündung im äusseren Gehörgang. "Deutsche med. Woch.," April 10, 1880.
43. Zuckerkandl, E.—Ueber eine seltenere Ausbreitungsweise von Osteophyten im Schläfebeine. "Monatsch. f. Ohrenheilk.," March, 1880.
44. Gellé.—De la strychnine dans certaines affections de l'ouïe. "La France Méd.," March 20, 1880.
45. Hofmann, E.—Blutung aus den Ohren bei einem Erhängten. "Wien. med. Presse," March 7, 14, 1880.

46. Cassels, P.—Ueber die Ohrenkrankheiten in ihrer Beziehung zu den Lebensversicherung-Gesellschaften. "Allg. w. med. Zeitschr.," March 2, 9, 16, 1880.

47. Cassels, J. P.—Report of the aural work done in the Glasgow Royal Infirmary from Nov. 1, 1878, to Nov. 7, 1879. "Glasgow Med. Jour.," May, 1880.

48. Thompson, H.—Clinical lecture on a case of otitis, with abscess of the cerebellum and pyæmia. "Med. Times and Gaz.," May 8, 1880.

49. Boucheron.—Sur un mode de traitement de certaines surdités et surdi-mutités infantiles. "Gaz. Méd.," May 8, 1880.

4. Dr. Thomas's conclusions from his researches into the efficacy and mode of action of *the audiphone and the dentaphone* are as follows: 1. Both instruments depend for their action upon the principle in acoustics that solids vibrate in unison with the sound-waves produced in the air near them. The size of the sound-receiving sheet governs the distance at which the instrument will act, and the dimensions must be increased in proportion as the source of sound is removed. The audiphone is, therefore, better adapted than the dentaphone for use at a distance. 2. They supply but a very small fraction of normal hearing, much less than a hundredth part. In deaf-mutism, repeated tests show that those who are able to hear with the aid of the audiphone hear their own voices perfectly without it; while those who are unable to hear their own voices without it can hear no other voice with it. 3. Sensible vibrations, produced by and corresponding to those of the voice, are propagated in the hard palate and base of the skull of persons speaking in ordinary tones, and are found to be transmitted throughout the skull with varying degrees of intensity, according to the point of observation chosen. These may be evidenced as articulate sounds, and distinctly as such through the rod-osteophone. These vibrations account for the hearing of his own voice by a very deaf person under certain circumstances. Auto-audition, for deaf and well alike, includes among its leading factors these bone-vibrations; and the topographical relations of the larynx and vault of the pharynx to that portion of the temporal bone which includes the internal ear supply good *a priori* grounds for reaching the same conclusion.

5. Moos mentions some minute histolological alterations in the labyrinth in a case of *chronic suppuration of the middle ear*. They consisted in microscopically demonstrable hæmorrhages, with pigment deposits. As a consequence of the hæmorrhage, there was inflammation, which led to hyperplasia of the connective-tissue elements, with fatty degeneration. There was partial atrophy of the epithelial tissue and nerve, with marked colloid formation. The atrophy could be traced to the ganglion-cells.

Stimmel spoke of the treatment of *exostoses of the external auditory canal* by the insertion of thymol wadding, by which means, in a short time, a very perceptible diminution of the exostoses is effected.

Gottstein considers that the term *Ménière's disease* should not be used, because very various morbid conditions may bring about impaired hearing and loss of equilibrium. He objects also to the term "*vertigo ab aure læsa*" of neurologists, because it has not yet been proved whether the loss of equilibrium is in the ear or in the brain. After excluding disease in the conducting apparatus as a cause of the complex symptoms in a given case, he distinguishes two forms of this affection: the apoplectic and the inflammatory. In his opinion, the question as to whether or not we have to do in these cases with a labyrinth disease is yet an open one.

8. Moos relates the history of a man who was attacked with *acute purulent otitis media, the result of pharyngeal diphtheria*. The right external auditory canal was filled with a dark-red tumor, freely movable.

It was removed with the Wilde-Blake snare, together with the entire malleus. It was found to spring from the whole circumference of the manubrium. The patient was discharged cured five months later, the cavity of the drum having entirely closed. The hearing distance for the acoumeter was 0·08.

10. Moos reports a case of *traumatic paralysis of the right chorda tympani nerve, caused by the Wilde-Blake snare in removing a polypus* which sprang from the region of the stapes. A spontaneous cure occurred in seven days.

13. Hartmann thinks that congestion of *the auditory organ in typhus fever* is an essential part of the congestion of the head in all cases. Griesinger thinks the deafness in this disease is due to catarrh of the middle and external ear. Hartmann has found mastoid periostitis as a complication in two cases, and affections of the labyrinth in three cases. All the patients recovered completely.

14. Brunner here considers at considerable length the subject of *subjective noises in the ear.* He proposes a general theorem: When a sudden, violent wave of air strikes our ear, a ringing in the ear ensues, which lasts for a longer or a shorter time. In such a case Brunner regards the ringing in the ear as a mechanical irritation of the auditory nerve, rather than an irritation transmitted by the specific terminal organs in the labyrinth. He then considers reflex ringing in the ears, or that which is transferred to the auditory nerve from other nerve-tracts. Next he takes up the various sounds or noises of different pitch, especially the singing, ringing, seething, and chirping noises in cases of catarrhal otitis media. The roaring noise is different, not only in the character of its tone but in its mode of origin, being, according to Brunner, an autoperception of blood- and muscular noises in a large majority of cases, though he does not deny that it originates in the labyrinth or centers. He holds that the blood-noise can be distinguished from the muscular noise. All factors which strengthen the resonance in the ear, any abnormal reënforcement of the blood-noises, or any hyperæsthesia of the auditory nerve, are favoring circumstances for the hearing of the movement of the blood in the ear or its neighborhood. Brunner considers, finally, the subjective hearing of connected melodies. This is a more central symptom, occurring after the administration of quinia sometimes, and occasionally after cerebral apoplexy; and this hyperæsthesia may exist with complete deafness. The whole article is one of great interest, and worthy of careful perusal.

17. Knapp mentions briefly the important points in the symptomatology and course of *mastoid disease.* He agrees with modern otologists in making two great varieties, external and internal mastitis—dividing each variety into two classes, primary and secondary. The primary inflammations, both internal and external, are very rare. Chronic secondary mastoid disease is common. Knapp speaks of a spherical protrusion of the upper and inner end of the meatus as suggestive of the retention of morbid material within the mastoid cells, and of the necessity of opening them at once. Attention is also called to the frequency of the retro-aural abscess. The operative treatment for the removal of sequestra is also briefly considered. The paper is a practical one, but confined within too brief limits.

20. Blau's cases of *disease of the labyrinth* are interesting. The first was one of concussion of the labyrinth, in consequence of a shot fired very near the ear, in which the symptoms were a permanent ringing, so intense as to craze the patient, and muffled hearing, which improved under treatment. A second case was one of hæmorrhage into the internal ear in consequence of a blow upon the vertex. There resulted immediately a roaring in the head, complete deafness, and a permanent ringing in one ear. The patient also staggered when he walked. Nothing abnormal was visible in the ears externally. The hearing in one ear was regained under treatment.

34. Jacoby reports three cases of that comparatively rare disease, *primary periostitis of the mastoid process*, two of them occurring in patients of advanced life. The greater part of the paper, on secondary periostitis, contains nothing essentially new or valuable.

35. Blake's paper, *on auditory exostoses in prehistoric man*, is an interesting one from both the ethnological and pathological standpoints. The crania of the mound-builders form the basis of his investigations. He refers briefly to the views of Seligmann, Welcker, and Turner, especially in regard to a possible connection between the occurrence of these growths and the artificial elongation of some crania, and also to the influence of the latter in producing a narrowing of the external auditory meatus, met with in Peruvian crania. Blake confirms Turner's opinion that there was "a tendency on the part of the aboriginal inhabitants of the American continent to modifications in the configuration of the external auditory passages." Blake first examined six Peruvian crania, in which there existed exostoses in the external auditory canals. These growths were almost uniformly situated at the entrance of the canal, and upon the anterior-superior or posterior-inferior wall. The orifice of the meatus was much narrowed, aside from any alteration in shape, in consequence of the exostoses. Blake then examined 195 crania taken from the mounds in the Cumberland Valley, Tennessee, and carefully took the measurements of the external auditory meatus, both in the vertical and antero-posterior diameters; the average vertical diameter was found to be 10·1 mm., and the average antero-posterior, 6·3 mm. Exostoses were found in 36 of the 195 crania. They occurred in both canals in 12 out of the 36 crania; and, of the remainder, they were found in the right canal in 9 crania, and in the left canal in 15 crania. There were found 54 exostoses in all, 42 being on the posterior wall, and 12 on the anterior wall. There were two principal forms assumed by these growths: the *rounded*, of which there were 12, and the *flattened*, of which there were 42. Exostoses occurring at the present day may, in the majority of cases, be referred to some source of irritation in an existing disease of the external or middle ear. In the crania examined by Blake, most of the exostoses occurred on the posterior wall, which is the one most exposed to external violence, and this may have had something to do with their causation. The growth of these exostoses can not be regarded as a race characteristic, peculiar to American crania, though they are perhaps more common in New-World races. Special pains were taken to examine the mound-builders' crania for other evidences of syphilitic disease, but none were found. One possible influence which may have a bearing upon the occurrence of these growths is an hereditary tendency. Of thirty cases of exostoses found in these crania, ten came from one distinct locality, and six from another, which is at least a suggestive fact. The paper concludes with a tabular statement of each examination.

42. Weber-Liel's *abortive treatment of furuncles in the auditory canal* consists in the hypodermic injection of three or four drops of a five-per-cent. solution of carbolic acid into the commencing furuncle, and, if anæsthesia is not produced by this, the injection may be repeated. The usual result is that within fifteen minutes the tension and pain yield and disappear; and, if the case is seen early enough, this one injection may suffice.

43. Zuckerkandl reports two cases. The first represented the development of *osteophytes in the temporal bone* of the right side, upon the external surface of the mastoid process, in the mastoid fissure, in the sigmoid fossa, at the opening of the Fallopian canal, and in the auditory canal. When the mastoid was opened, all its cavities were found either filled or very much diminished in caliber by a layer of osteophytes. The *second case* was one of caries of the mastoid process, with perforation into the cavity of the skull and jugular fossa, and development of osteophytes in all the air-spaces except the drum. The morbid process also extended from the point of the petrous bone to the occipital point.

SEMI-ANNUAL REPORT ON PSYCHOLOGICAL MEDICINE.

No. I.

By NORTON FOLSOM, M. D.,
BOSTON.

1. Ball, B.—The history of mental medicine. "Lancet," Jan. 3, 10, 1880.
2. Folsom, C. F.—A lecture on insanity. "Boston. Med. and Surg. Jour.," May 20, 1880.
3. McDuffie, W. C.—A few thoughts on the subdivisions of insanity. "N. Carolina Med. Jour.," April, 1880.
4. Hammond, W. A.—Mysophobia. "Independent Pract.," March, 1880.
5. Ritti, A.—De la claustrophobie. "Gaz. Hebd.," Jan. 23, 1880.
6. Shaw, J. C.—General paralysis of the insane, clinically and pathologically. "Proc. Med. Soc. County of Kings," Jan., 1880.
7. Magnan.—De la paralysie générale. "Tribune Méd.," Feb. 29, March 7, 1880.
8. Ball.—Des maladies mentales et de la paralysie générale. "Tribune Méd.," April 18, 1880.
9. Hammond, W. A.—Remarks on paralytic insanity, or general paralysis of the insane, with special reference to the case of Abraham Gosling. "Med. Gaz.," May 8, 1880.
10. Macdonald, A. E.—On general paresis. "Jour. Psych. Med.," N. S., vi, 1.
11. Magnan.—De l'aphasie. "Tribune Méd.," Jan. 25, 1880.
12. Magnan.—Deux cas d'aphasie dans la paralysie générale. "Gaz. Méd. de Paris," Feb. 7, 14, 1880.
13. Spitzka, E. C.—Some not generally known forms of mental alienation related to epilepsy. "St. Louis Clin. Record," March, 1880.
14. Cleveland, J. H.—Relation of epilepsy to insanity. "Cincinnati Lancet and Clinic," Jan. 17, 1880.
15. Garnier.—Délire épileptique. Coexistence chez un épileptique d'un double délire; l'un chronique, avec idées de persécution; l'autre de nature mystique, passager et consécutif aux attaques. "Gaz. Hebdom.," Feb. 27, 1880.
16. Clarke, H.—Heredity and crime in epileptic criminals. "Brain," Jan., 1880.
17. Teed, J. L.—On mind, insanity, and criminality. "Jour. Nerv. and Ment. Disease," Jan., 1880.
18. Cowling, R. O.—Influence of shock on memory. "Amer. Practioner," Jan., 1880.
19. ———.—Syphilis and mental alienation. [Editorial.] "Canada Lancet," Feb. 1, 1880.
20. Foville, A.—On the relation between syphilis and general paralysis. "Jour. Mental Sci.," Jan., 1880.
21. Tuke, D. H.—Intemperance in study. "Jour. Mental Sci.," Jan., 1880.

22. Sorel, F.—Observations de troubles nerveux insolites liés à la fièvre tellurique. "Gaz. Hebdom.," May 21, 1880.

23. De Watteville, A.—The conditions of the unipolar stimulation in physiology and therapeutics. "Brain," April, 1880.

24. Doran, A.—Deficient development of the uterus; atresia of the os externum; atrophy of the ovaries; insanity. "Trans. Obstet. Soc. London," vol. xxi, 1879.

25. Meachem, J. G.—Insanity a symptom of uterine disease. Two cases of insanity caused by ulceration of the cervix uteri, and cured by appropriate treatment directed to that condition. "Chicago Med. Gaz.," March 20, 1880.

26. Bigelow, H. R.—Morbid impulses. "Med. and Surg. Reporter," Jan. 3, 1880.

27. Bannister, H. M.—Emotional insanity in its medico-legal relations. "Jour. Nerv. and Ment. Disease," Jan., 1880.

28. Folsom, C. F.—Cases of insanity and of fanaticism. "Boston Med. and Surg. Jour.," March 18, 1880.

29. Audiffrent.—Sur une distinction nosologique importante à propos de la question de responsibilité. "Tribune Méd.," May 16, 1880.

30. Howard, H.—A case of consecutive chronic dementia, involving an important medico-legal question. "Canada Med. Record," April, 1880.

31. Fronmüller.—Lunatisch? "Memorabilien," March 6, 1880.

32. ———.—Lunacy reform. Our asylums as seen by a competent foreign visitor. [Editorial.] "Arch. of Med.," April, 1880.

33. Hammond, W. A.—The construction, organization, and equipment of hospitals for the insane. "Neurol. Contrib.," i, 2, 1880.

34. ———.—Provisional report of the Committee of the New York Neurological Society relative to the subject of insane asylum abuses. "Neurol. Contrib.," i, 2, 1880.

35. Lindsay, W. L.—The protection bed and its uses. "Edinb. Med. Jour.," Jan., March, 1880.

36. Curwen, J.—On the propositions of the Association of Superintendents of American Hospitals for the Insane. "Alienist and Neurologist," April, 1880.

37. Burman, J. W.—On the separate care and special medical treatment of acute and curable cases in asylums. "Jour. Mental Sci.," Jan., 1880.

38. Urquhart, A. R.—Three Australian asylums. "Jour. Mental Sci.," Jan., 1880.

39. Bucknill.—Private lunatic asylums. [Paper and discussion.] "Jour. Psych. Med.," N. S., vi, 1.

40. Balfour, W. G.—Remarks on private lunatic asylums; a reply to Dr. Bucknill. "Brit. Med. Jour.," Feb. 28, 1880.

41. Tuke, H.—Address and debate on lunacy laws. [Med. Soc. of London.] "Lancet," April 24, 1880.

42. ———.—The lunacy laws. [Editorial.] "Med. Times and Gaz.," March 27, 1880.

43. Blake, J. E., and Hamilton, A. McL.—A preliminary report upon the use of dilute nitrous oxide gas in the treatment of melancholia and nervous exhaustion. "Med. Record," Jan. 31, 1880.

44. Browne, W. A. F.—The curability of insanity. "Jour. Psych. Med.," N. S., vi, 1.

45. v. Krafft-Ebing. R.—Die Behandlung im Beginn des Irreseins. "Med.-chir. Centralbl.," April 2, 1880.

46. Gray, J. P.—Hyoscyamia in insanity. "Amer. Jour. Insan.," April, 1880.

5. *Claustrophobia*, as Dr. Ritti remarks, is a hybrid word signifying a fear of closed places. If those learned men, represented also on this side of the water, who are so very fond of naming as a disease every separate symptom of disorder of the nervous system to which mankind is liable, include in the category all those inmates of our asylums who are strongly impelled to take "French leave," it must be confessed that this disease is not rare.

6. Dr. Shaw remarks that *general paralysis* is often a misnomer, as the patients are not generally paralyzed. The diagnosis is usually made in consequence of the existence of delirium of exaltation, and this sign is generally reliable. He cites typical cases, and finds that four clinical groups exist in the disease: 1, those in which the psychical symptoms are marked, and the somatic symptoms slight; 2, where somatic symptoms are decided before delirium occurs; 3, with somatic symptoms decided, without delirium, the psychic symptoms being those of dementia; and, 4, those usually called softening of the brain, somatic symptoms predominating, dementia without delirium occurring later.

11. The following is an epitome of the full report of a clinical lecture on *aphasia* delivered at the Asile Sainte-Anne. Aphasiacs are not rare in ordinary hospitals; you often meet patients with impaired use of the right side of the body, who express their thoughts with difficulty, and have a certain degree of feebleness of intellect. But sometimes, besides aphasia, we find more or less intellectual trouble, expansive or depressive delirium, and morbid impulses. These belong to the asylum and the alienist, rather than the general hospital, and it is these that are here especially considered. But the hemiplegic and the insane aphasia have the same causes and symptoms, and we can study the one by the other, adding to the picture the peculiarities of the insane variety. Aphasia is only a symptom, and is produced by a variety of lesions. It is described as a disturbance of the function of language, but all disturbances are not aphasia (paralysis of the vocal muscles, melancholia, etc.). True aphasia comprises only *verbal amnesia* and *logoplegia*. In the first, the patient can not pick out a named object; he has lost the relation between words and ideas. In logoplegia, a patient readily indicates a named object, but can not name one which is pointed out. He still associates the thing with the word, but is powerless to frame it himself. The determination of these facts, of comparatively recent date, has led the way to the knowledge of cerebral localization. Gall, Bouillaud, Marc Dur, Broca, de Boyer, and Pitres, by successive steps, have established that the seat of the lesion in aphasia is the left third frontal convolution and the island of Reil, or the white substance subjacent to them. It is evident that the function of a cortical center might be interrupted by disturbance in the ganglion-cells, and, as well, in the conducting fibers which connect them with the medulla and spinal cord. When the lesion is in the cortical regions just mentioned, it is the function of speech itself which is lost, and we have *verbal amnesia;* but when the gray substance is intact, and the conducting fibers alone are involved, the patient *understands* but can not *express;* he has *logoplegia*. The limited region of the two vertical convolutions near the fissure of Rolando is now recognized as the *psycho-motor* center. Behind it extends the region of the centralization of general and special sensibility. Lesion of the conducting fibers from this region determines loss of sensation on the opposite side of the body, just as lesion of the pyramidal bundle of fibers, fully described by Charcot, leading from the psycho-motor center, determines hemiplegia.

A sensation reaches the sensorium by three stages—through the spinal cord, the medulla, and the ganglion at the base of the brain—from there, by a system of fibers thrown like a bridge between the posterior and anterior parts of the brain, it reaches the point where it transforms itself into an image, and, as it were, buries itself in the state of memory. When we *see*, the retina is first impressed by an image, and the resulting sensation, having undergone a first transformation in the tubercula quadrigemina, which renders it vaguely perceptible, then in a certain point [*pli courbe*] in the cortical layer undergoes a second transformation, and becomes plainly perceptible, and now, under the influence of attention, by a system of fibers extending to the anterior part of the brain, reaches the sensorial region. Auditory sensations, in the same way, pass from the internal ear and the auditory nerve to a first center in the medulla, thence to a second center in the temporal region, according to Ferrier, and thence to an anterior sensorial region near that appropriated to sight. The process is the same for all sorts of sensations; so that consciousness finally resolves itself into a complex image, of which the elements are inseparable. The voice of a known person recalls the features; the features, the voice. The sight of an object may revive odorous, gustative, tactile impressions which have been excited before.

Clinical observations confirm these physiological theories. A man of sixty-five, having fallen in the street, could not rise alone, and expressed himself, even with the aid of signs, with great difficulty. It was a case of what is commonly called apoplexy, that is, of slight hemiplegia, with a certain degree of aphasia. At the end of some months he had improved. All symptoms had not entirely disappeared, but he walked better, and expressed himself more easily. I got him to write me an account of his case, and tell me how he felt. He sent me three notes, all very correct in style and spelling. Here we have an aphasic but not an agraphic patient. But this man, who writes so well just what he wishes, can not read his own writing. If I write for him a sentence in large, plain letters, he can not decipher it. This is because the encephalic center where he elaborates expression is intact, and the conducting fibers which lead to the apparatus of execution continue their function. But he can not read, because the graphic symbol, on account of some rupture of the conducting fibers, can not penetrate to the same center, and no longer awakens the corresponding idea. The retina and the excito-reflex center are intact, but there is an obstacle in the passage through the brain. This has been called the blindness of words. Deafness of words has been similarly recognized. Another case is that of a man aged sixty-four, a journalist. Two years ago he had an apoplectic attack, with loss of consciousness, followed by right hemiplegia. He has since had frequent attacks of giddiness, and has grown irritable and feeble-minded. We may suspect here atheroma of the cerebral arteries. This man is aphasic. If I show him this pen-holder and ask him its name, he says, after much hesitation, "It is a point; it is a thing." But if I ask him its use, he indicates it perfectly by gestures. This is logoplegia. The interior language is preserved; the expression only fails. He can not call a key by its name; but correctly indicates its use. He recognizes certain colors, but can name none. Now to compare this patient with the preceding one. I write in large letters these three words "I can talk," and ask him to copy them. You see with what effort he manages to trace a series of incoherent strokes which have no meaning. He can not read what I have written, and is powerless to reproduce it. But, if I say to him, "Write 'I can talk,'" he writes it perfectly well. There is in this case, then, interruption in the first part of the cerebral journey. Visual sensation no longer exists, but auditive sensation does, and it is that which, reaching to the function of language, recalls the image, and enables him to write the very words he can not read. This man, however, differs still further from the first. He can read, when he gives full attention, the words which he has written. This is explained anatomically by the fact that in the first case the rupture of communication is complete and definite, while in the second it is incomplete or passing away. It is very probable that the condition of the latter patient will improve. But let us finish our examination. If we ask him to count, he does so, up to forty, without the least error. I tell him to write these same numbers that he pronounces, and he does so perfectly well. Now I, in turn, write the number 46, and ask him to reproduce it. He writes, laboriously, "045." But if I say "Write forty-six," he does so at once. I write the word "cousin," which he knows perfectly well, and ask him to copy it. He writes "4064." It is the effect of temporary habit. He continues to make the figures of which the image is still present in his mind. The written word which I give him can not serve him as a guide, for it does not arrive at the sensorium, and his hand continues to trace figures. But, if I tell him to write "cousin," he does it at once, because the tonal image awakens the memory of it.

13. Delusions and hallucinations are stated not to be the elements which most prominently modify *testamentary capacity in epileptic insanity.* They may not modify the provisions of a will in the slightest degree. The power of memory, independence of will, and appreciation of the importance of the act have more bearing in such cases.

14. Dr. Cleveland notes that, in regard to the *relation of epilepsy to insanity*, we may be called on to consider how far repeated attacks of epilepsy, by deteriorating the mind and body, degrading the moral nature, and shattering the will power, creating irritability, suspicion, and moroseness, may dispose to crime and modify responsibility, independently of those cases of epileptic mania proper, where crimes are committed irresponsibly, as a part or immediate consequence of a seizure, and where little or no recollection of the act exists.

16. Dr. Clarke, in his article on *heredity, epilepsy, and crime*, gives the results of an elaborate investigation of the history of 119 epileptic criminals. He finds a much greater amount of hereditary neurosis than is usually stated. The frequency of drunkenness, epilepsy, crime, and insanity in their families is remarkable. The larger proportionate number of offenses for which this class are committed are those connected especially with drunkenness and vagrancy. There is a greater amount of crime, as indicated by the number of convictions, among epileptics.

17. This is a discussion of the abstract nature and relations of *mind, insanity, and criminality.* A diagram is given, representing, in triangular form, what is called the trajectory of nerve-force, beginning with an external impression, and proceeding through sensation, perception, emotion, and reason, to volition, and thence to motor-impulse or action, various short cuts not under the control of reason being indicated by dotted lines and arrows. Dr. Teed defines mind as the faculty by which one judges of things and their relations, and controls his actions in accordance with such judgment. Thus it is a *function*, not an *entity.* But he also defines it as the sum total of all the ideas formed. Insanity he defines as a disease which prevents a correct judgment of the fitness of things, and the control of the actions; criminality as a willful or careless disregard of the fitness of things, with absence of control over the actions. In criminality lies the only difficulty in distinguishing between sanity and insanity. When he denies even the possibility of supposing the lower animals to be the subject of depravity or insanity, the author makes us incline to ask, why, then, we punish them for misconduct, and under what head he would class the hallucinations and excitement of a rabid dog. Since he acknowledges that the faculties of the human mind are deranged by disease of the cerebrum, and that no significant difference in anatomical structure exists between the brain of the more intelligent animals and that of man, it is not apparent how he arrives at the conclusion that the difference in their functional power is one of kind and not of degree.

18. In Dr. Cowling's article on the *influence of shock on the memory* five cases of severe injury are given, in all of which, however, violent concussion, sufficient to stun the patient, was a feature. There was more or less lapse of memory in all. The author thinks that the point at which memory leaves off, in such cases, is at the record of the last prominent idea; that violent deaths are not painful even by anticipation; and that the testimony of the individual as to the circumstances of his accident must be taken with reserve. If a violent physical shock to the brain obliterates memory of the time just preceding, it is not proved that the person did not suffer during that time. As to the effect of *nervous shock*, or *collapse*, on memory, these cases prove nothing.

19. In commenting on Dr. Mickle's cases of *insanity of syphilitic origin* in the "Journal of Mental Science," 1879, the editor calls attention to the class of patients appearing to have general paresis, but suffering from intense cranial pain. This symptom tends to indicate the syphilitic origin, and hence there is a certain probability of improvement or recovery, under appropriate treatment, in such cases, contrasting strongly with what is usual in general paresis.

26. Dr. Bigelow believes that *morbid impulse*, not controllable by the will, is always the result of previous family instability. It never manifests itself without previous warning. A man may commit a criminal offense through his inability to control such impulses, but in such cases the theory of *mania transitoria*, often urged with much ability, as in the Reynolds and McFarland trials, will not stand the test of inquiry. Evidence of disease is requisite, other than the criminal act; and a will sufficiently weakened to fail in controlling any manifestation implies equal weakness in all things, and it is not capable of realizing its own insufficiency. Such a condition is true insanity, and should be treated as such.

27. Dr. Bannister narrows the theme of *the medico-legal relations of emotional insanity* to the subjects of morbid impulse; moral, and some forms of epileptic insanity; and that class of cases in which it has been claimed that the patient, arraigned for crime, was, at the moment it was committed, irresponsible and insane, though apparently rational at all other times. He gives, as a general medical definition of insanity, "A disease or defect of the brain, causing disordered action of the mind." He maintains that the emotions are only inner and more obscure sensations, and that, like them, they are antecedent to every species of intellectual action, and he believes, therefore, that the emotions, too, have their cerebral centers, and finds confirmation of this in the mental effects of disease of the different viscera. Hence he draws "all the possibilities of emotional or moral insanity"; but thinks the dangerous character of the doctrine that a man may be irresponsible and insane, with full intellectual powers, has led some eminent alienists to use every subterfuge to discredit such cases. He thinks the underlying idea in all *legal* definitions, especially in relation to criminal jurisprudence, is "absolute irresponsibility for acts"; while to the medical mind there exists every degree of responsibility among the insane. Thus undue weight is given by lawyers to the medical opinion that a sudden emotion, for instance, could make a man temporarily insane in a given case, and irresponsibility is inferred; while the medical opinion on this point might be the reverse; and this misunderstanding leads to the distrust of experts' opinions expressed by courts. The author proceeds to consider melancholia and the various forms of disease characterized by special criminal tendencies, such as kleptomania, existing without delusion. He appears to regard the absence of delusion as implying the absence of *any* intellectual deficiency. But he gives a case at some length where a mother had an impulse to kill her child. Hers was a pronounced case of the insane temperament; she was sent to an asylum at her own desire, on the testimony of herself and friends; escaped in a week; gave much trouble by very peculiar unreasonable conduct, and was not regarded by the superintendent as sound in mind when discharged. Yet Dr. Bannister says there was at no time any intellectual involvement! The author quotes Luys, and agrees with him in regarding morbid impulse as a reflex phenomenon, similar in nature to the movements in chorea and epileptic convulsions. He quotes Bucknill in support of the existence of general moral insanity, but probably errs as to that gentleman's opinion about Jesse Pomeroy, the child torturer of Massachusetts. "Sane, and therefore responsible," was his written statement at the time he examined him. To be sure, it is difficult to reconcile this with Dr. Bucknill's position in the lecture above quoted from "The Lancet" for April 27, 1878, where, in commenting on such cases as those of William Dove, Jesse Pomeroy, and others, and differing materially from the views of Pinel, Pritchard, and others, while acknowledging that these criminals are not sane, he yet declines to recognize any modification of their responsibility. This position seems as undiscriminating as it would be to regard *any* degree of mental deficiency as totally destroying responsibility. Dr. Bucknill evidently derives great satisfaction from the language of the judge in the Dove case, who remarked that he was evidently not sane; that insanity was strong evidence of innocence, but not conclusive, the questions being "Did the accused know he was doing wrong? Could he help it?" Dr. Bucknill would give a categorical answer to these questions in all cases, we presume, and in so doing would undoubtedly give great satisfaction to "the legal mind," but we question if the absolute truth could thus be accurately presented. The physicians who examined Pomeroy varied widely in their estimates of his responsibility, but Dr. Bucknill was probably the first to estimate his guilt as of the highest degree.

Believing in the existence in the brain of a special nervous mechanism for the moral sense, Dr. Bannister adduces the following reasons for expecting disorder of this sense alone: 1. Analogy. 2. Its high position in the scale of capacities of the mind. 3. Suppression of this sense alone in dreams, trances, etc. But he believes that the subjects of this impulsive disorder should be held "to a certain degree of responsibility for the control of their explosive natures," and that there ought to be something in the history of the person, besides the criminal act itself, to assist the conclusion that it is the offspring of disease. He makes an earnest claim for the legal recognition of partial responsibility, saying that English courts have for hundreds of years been trying to make hard and fast lines between sanity and insanity in criminal cases, and that not one of their dicta can stand medical criticism.

32, 33, 34, 35. The harm done to the very class they assume to protect, by the misguided authors of the late agitation in regard to *the management of lunatic asylums*, has already been indicated in this "JOURNAL." Intelligent criticism of methods, from those who have themselves engaged in the problem of the cure of the insane, demonstrations of possible improvements, by those who have the practical experience which can alone determine their value, are desirable, and have always been welcomed, not deprecated, by the superintendents of our asylums, whether they originated in this country or were extracted from "competent foreign visitors." Dr. von Steinen generalizes in regard to our asylums from insufficient means of observation, and is perhaps too sweeping in his assertion that "Conolly has not lived for America." But he at least gives our superintendents the credit for the best intentions and interest in doing justice to patients. In regard to what he saw he is entitled to a respectful hearing, although there may be another side to some questions which are no questions with him. At this time, when criticism, from arbitrary though self-constituted authority, has degenerated into insolent abuse, it is interesting to note evidence in favor of that *bête noire*, the "crib," or protection-bed, from an impartial and experienced authority, Dr. Lauder Lindsay, who finds it a humane and useful means of treatment. Dr. Gilchrist, of Dumfries, he states, has employed it for twenty-five years, and still does so. In fact its use appears to be extensive and extending.

39, 40, 41, 42. At a branch meeting of the British Medical Association, at which the *lunacy laws and private asylums* were considered, Dr. Bucknill thought that, on the ground that the lunacy laws in regard to private asylums had tended to sequester the insane from the care and treatment of the medical profession at large, to render treatment of any single case more difficult, to herd lunatics together in special institutions, and to create a class (the proprietors) responsible to the authorities for their confinement and detention, but not for their proper medical treatment, the members of the Association should strive for such changes in the laws as would result in the eventual abolition of all private lunatic asylums. He did not feel bound to extend fellowship to the proprietors of these asylums as proprietors, and claimed the pecuniary interest of medical men in the asylums to be really small. Hence his attack was not to be considered as one on professional associates. The underlying principle of profit, derived by the proprietors from the care of the insane, and leading to their unjust and prolonged detention, the placing of the liberty of the subject within control, practically, of those whose interests would lead them to keep them in confinement, was the basis of his objection to the present system. He asked whether it was right that diseased and helpless persons should be detained and confined in asylums for the profit of private individuals—the amount of that profit depending on what these individuals chose to expend upon the comfort and enjoyment of their inmates, and its continuance upon the duration of the disease or what they chose to think its duration. Under new laws, the deprivation of the personal liberty of a subject should be undertaken only by the State, and the necessary State asylums should be provided. Quiet patients should be treated by the medical profession in domestic life, with increased fees, and the laws should encourage this. In regard to detention on certificates, he said a man should be deprived of his liberty only by the act of the civil power.

In the discussion which followed, very diverse views were shown. Stress was laid on Dr. Bucknill's citing no facts in support of his position, and reasoning from possibilities rather than actualities. Tributes were paid to the character and conduct of proprietors of asylums. The purchase and control of existing institutions by Government, with the retention of the present physicians, were advocated by Mr. Balfour. At an adjourned meeting Dr. Forbes Winslow claimed in forcible language that the abuses complained of did not exist, and that investigation had thoroughly proved this, and claimed that, this being the case, aspersion of the character of medical proprietors was uncalled for and unjust.

At a meeting of the Medical Society of London, Dr. Harrington Tuke dissented entirely from the views lately promulgated by Dr. Bucknill, who had shown much power in his ideas for the destruction of private asylums, but had no suggestions for their improvement. Dr. Tuke thought it better to raise the standard of the inferior ones, believing that some were good. His remedy for any existing evils would be for the usual medical attendant of patients in the better class of society to make himself familiar with the character of the asylum to which he sent his patient and with the treatment pursued. The many petty and the few grave charges made against private asylums would dissolve in the clear light of more extended medical supervision. In the discussion following, other attacks were made upon Dr. Bucknill's position, and he replied, claiming to be possessed of ample facts to support his views, but modifying his statement that he would absolutely abolish all private asylums, and excepting from destruction any good one, well managed as a real hospital or as a voluntary retreat.

The "Medical Times and Gazette" criticizes the recommendation of Professor Sheldon Amos, in a recent work on "Constitutional Law," that lunatics should always be restrained through a justice, with quasi-judicial proceedings. It regards the agitation against the lunacy laws as really based on the constitutional tendency of lunatics and some of their relatives, with the aid of a few misguided reformers, to create a periodical stew about abuses. It thinks a quasi-judicial proceeding might help matters temporarily, and would at least be an important safeguard to certifying physicians.

43. The authors compare the effect of the inhalation of *nitrous oxide in melancholia and nervous exhaustion* to that of champagne without its reaction. It should be used in the quantity of twenty gallons daily, "well diluted"; numbness and slight blurring of sight indicate that it should be discontinued. Properly used, it causes a feeling of lightness or buoyancy and slight dizziness. The frequency and force of the pulse are increased. It cures "the blues," and makes one feel better and brighter all day. Used in the morning, and *not* at night, it remedies insomnia. It is suggested as a cure for alcoholism. Nervous prostration, hysteria, and melancholia are benefited by it. In defective circulation, it favors assimilation and the action of iron. It is not indicated in sthenic cases, or where there is a tendency to cerebral congestion or excitement, but rather for the irritability of exhaustion.

◆

Miscellany.

Army Intelligence.—*Official List of Changes of Stations and Duties of Officers of the Medical Department of the United States Army from May 14, 1880, to June 13, 1880.*—Vollum, E. P., Major and Surgeon, having reported in person at these Headquarters, is assigned to duty at Fort Hamilton, N. Y. H. S. O. 84, Department of the East, June 1, 1880. ═══ Irwin, B. J. D., Major and Surgeon. To be relieved from duty at Fort Meade upon return to that post of Assistant Surgeon Brechemin, and then to report in person to the Commanding Officer at Fort Snelling, Minnesota, for duty as Post Surgeon. S. O. 63, Department of Dakota, May 27, 1880. ═══ Byrne, C. C., Major and Surgeon. Relieved from duty in Department of Dakota, and to report in person to Commanding General, Division of Pacific and Department of California, for assignment to duty in Department of California. S. O. 107, C. S., A. G. O. ═══ Woodward, J. J., Major and Surgeon. To proceed to Europe under special instructions to be communicated by the Surgeon General of the Army. After completion of the duties assigned him, to return to his station in Washington, D. C. S. O. 105, A. G. O., May 12, 1880. ═════ Happersett, J. C. G., Major and Surgeon. Granted leave of absence for three months, to take effect when relieved from duty in Department of the East. S. O. 118, A. G. O., May 28, 1880. ═════ Happersett, J. C. G., Major and Surgeon. Relieved from duty in Department of the East, and to report to Commanding General, Department of Texas, for assignment to duty. S. O. 107, C. S., A. G. O. ═════ De Hanne, J. V., Captain and Assistant Surgeon. Relieved from duty in Department of Texas, and to report by letter to Surgeon General. S. O. 107, C. S., A. G. O. ═════ McElderry, H., Captain and Assistant Surgeon. Upon withdrawal of troops from camp on White River, Colorado, to accompany them to R. R., and then repair to Fort D. A. Russell, Wyoming Territory, and report for temporary duty at that post. S. O. 42, Department of the Platte, May 12, 1880. ═════ Bartholf, J. H., Captain and Assistant Surgeon. Relieved from duty in Department of California, and assigned to duty in Department of the Columbia. S. O. 123, A. G. O., June 4, 1880. ═════ Lauderdale, J. V., Captain and Assistant Surgeon. Granted leave of absence for four months, with permission to go beyond sea. S. O. 111, A. G. O., May 19, 1880. ═════ Weisel, D., Captain and Assistant Surgeon. Granted leave of absence for four months. S. O. 122, A. G. O., June 3, 1880. ═════ Matthews, W., Captain and Assistant Surgeon. Relieved from duty in Department of California, to proceed to New York City, and report arrival to Surgeon General. S. O. 107, C. S., A. G. O. ═════ Harvey, P. F., Captain and Assistant Surgeon. Granted leave of absence for four months. S. O. 113, A. G. O., May 21, 1880. ═════ Byrne, C. B., Captain and Assistant Surgeon. Assigned to duty at Fort Johnston, North Carolina, relieving Assistant Surgeon V. Havard, who will comply with S. O. 74, C. S. (in his case, S. O. 65), Department of the South, June 1, 1880. ═════ Reed, W., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension of two months. S. O. 124, A. G. O., June 5, 1880. ═════ Hall, William R., First Lieutenant and Assistant Surgeon. To proceed to Fort Hays, Kansas, and report to Major Noyes, Fourth Cavalry, for duty with troops ordered to New Mexico. S. O. 118, Department of the Missouri, May 26, 1880. ═════ Tesson, L. S., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Cavalry Depot, Jefferson Barracks, Missouri, relieving Surgeon E. P. Vollum. S. O. 107, C. S., A. G. O. ═════ Gray, William W., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Point, California, and to return by steamer on the 31st inst. to his proper station, Vancouver Barracks, Wyoming Territory. S. O. 75, Division of Pacific and Department of California, May 26, 1880. ═════ Randolph, John F., Major and Surgeon. Died at Philadelphia, Pennsylvania, May 14, 1880. ═════ Youmans, Aug. A., Captain and Assistant Surgeon. Died at Toronto, Canada, May 19, 1880.

THE
NEW YORK
MEDICAL JOURNAL.

AUGUST, 1880.

Original Communications.

ARE THE BENEFITS TO BE DERIVED FROM INTERNAL URETHROTOMY, AS NOW ADVOCATED FOR THE RELIEF OF STRICTURE, COMMENSURATE WITH ITS DANGERS?*

By AMBROSE L. RANNEY, M. D.,
ADJUNCT PROFESSOR OF ANATOMY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

Within the last few years the operation of internal urethrotomy has, in the opinion of many prominent conservative surgeons, acquired an undue popularity. Despite the brilliant claims urged in its favor (and, if all that is claimed can be verified, they certainly are brilliant), and despite the long lists of patients who have been induced to undergo the operation (and the details of many have been published), the more conservative authors, to whose judicious decisions too much weight can not be given, since they must always act as guides to the young and often to the old practitioner, fail, as yet, even in their latest works, to support or justify the operation, save in exceptional cases, whose alarming growth may well excite dismay. It seems to me that the time has come when the profession, who are too apt to leave what is old and well-proven for that which is novel and not proven, should review the grounds upon which internal urethrotomy has become popular, the evils which it aims to cure, and the dangers which accompany it; and that they should also accord due weight to the opinions of men whose views are entitled to consideration, before accepting unconditionally a means of supposed relief, which is attractive from its rapidity and ease of execution, but which is not always successful, and, in some cases, not without danger.

---

* Read before the New York Academy of Medicine.

Internal urethrotomy is not a new operation. From the time of Paré, cutting instruments have been described, and modifications of these primitive appliances have, from time to time, sprung into existence, each presenting some exceedingly slight difference from its predecessor, in accordance with the taste and fancy of its advocate. The only essential point of difference between them allows, however, of their general classification into two kinds of instruments, viz., those which divide the urethral wall freely, and those which do not injure it severely.

It is not necessary to discuss here the relative merits of incisions from before backward or from behind forward, as a special aim of some instrument; nor to touch upon the fact that, by a previous *stretching process* before the incision is made, the certainty of division is made doubly sure. It is not the aim of this paper to discuss what is the best instrument for dividing a stricture, but to question the propriety of division, except under such circumstances as, in the general opinion of the best recognized authors, constitute a justifiable indication for the operation.

Sir Henry Thompson,* in reviewing the efforts of Reybard, in 1855, to popularize incisions within the urethra, says: "If the stricture be so confirmed that it will not yield to dilatation when carefully applied, a slight notch will not facilitate its disappearance; and an extended section of the urethra, if required to effect that which other means have failed to accomplish, permits the occurrence of internal hæmorrhage and urinal infiltration, since the wound has no external outlet; a risk which we are not justified in encountering."

---

* "Brit. and For. Med.-Chir. Review," October, 1855.

Professor S. D. Gross says:* "All the methods of treatment by incision, however carefully or judiciously conducted, are liable to be followed by serious or even fatal consequences."

Professor F. J. Gant† states in his last work: "I very rarely find it necessary to have recourse to internal section of the urethra."

Professor John Ashhurst‡ says in his late treatise: "Urethral fever is not an infrequent sequel of operations upon the urethra"; and again: "Gradual dilatation is by far the best mode of treating stricture in any instance where it is applicable."

Mr. John E. Erichsen § says: "Gradual dilatation is certainly the most successful mode of treating ordinary strictures of the urethra. Internal urethrotomy is not free from danger. The so-called 'urethral fever,' if fatal, reveals one of two conditions, viz., pyæmia or acute interstitial nephritis. It rarely becomes necessary for a surgeon who combines patience and skill to have recourse to those more severe methods of treatment which have been unduly extolled and too often practiced of late years."

Mr. T. Holmes,‖ recognizing the danger of urethral fever, discusses its possible prevention by alcohol and laudanum.

Mr. James Spence,¶ of Scotland, says: "Internal incision of strictures of the urethra has again become fashionable, and greatly to my regret. I can conceive no method more uncertain and dangerous. In any form of division from within the canal, the risks of bleeding and infiltration of the urine into the spongy texture of the organ must be very great, as there is no external wound." In the "System of Surgery," edited by T. Holmes, Vol. IV, p. 972, Sir Henry Thompson again says, speaking of internal urethrotomy: "No one who is experienced in the surgery of the urinary organs can question that unfortunate events must sometimes happen." Sir William Fergusson * makes the following statements: "Like all cutting operations, internal urethrotomy is not devoid of danger. Deaths have been recorded, besides evils from shock, hæmorrhage, and other annoyances. I can positively state, from my own personal observation, that it is *not always followed by entire relief* from after annoyances, as we have been led to expect."†

---

* "System of Surgery," Philadelphia, 1872, p. 823.

† "Science and Art of Surgery," Philadelphia, 1878, p. 777.

‡ "Principles and Practice of Surgery," Philadelphia, 1878, pp. 921, 923.

§ "Science and Art of Surgery," Philadelphia, 1878, pp. 855, 856, 719, 869.

‖ "Treatise on Surgery," Philadelphia, 1876, p. 795.

¶ "Lectures on Surgery," Edinburgh, 1876, p. 1072.

It may be offered as an objection to the statements of authorities such as these, that writers upon general operative surgery are forced, by the responsibilities of their position as authors, to err on the side of conservatism; and that those who have more exhaustively studied the special department of urethral diseases would be our best guides in deciding the question. Let us see, therefore, how the statements of such authors compare with some of those previously quoted.

In the last edition of Dr. Bumstead's work, edited by Dr. R. W. Taylor,‡ the following passages may be found: "Hæmorrhage is not infrequently an unpleasant accident following operations upon stricture. Internal urethrotomy is not free from the danger of hæmorrhage for *ten days* after the operation. *Curvature of the penis* is met with in many instances following internal urethrotomy of the penile urethra. It may exist to such an extent as to *impair or entirely prevent sexual intercourse.* The multiplicity of means devised to arrest hæmorrhage is suggestive of the liability of its occurrence." § "If I had only a 'stricture of large caliber,' presenting no obstruction to the urine and occasioning no inconvenience, no argument drawn from possible ills in the future could persuade me to be subjected to the knife, and *what a surgeon would not have done to himself he has no right to recommend to others.*'"

---

* "System of Practical Surgery," London, 1870, p. 702.

† The italics are my own.

‡ "Pathology and Treatment of Venereal Diseases," Philadelphia, 1879, p. 318.

§ The italics are my own.

In reviewing this work from which we have just quoted, "THE NEW YORK MEDICAL JOURNAL" of February, 1880, says: "It is to be hoped that the following words [those above quoted] will sink into the hearts of those callow young men who are itching to introduce a urethrotome into every urethra whose owner is so unlucky as to fall into their hands."

Sir Henry Thompson, although in a work published in 1854,* states that "dilatation is the most desirable treatment to employ, whenever the case will admit of it"; and he has not as yet receded from this view. Professor Samuel D. Gross, in a work renowned for its scholarly compilation,† states: "Notwithstanding the various attempts that have been made to supersede dilatation, and the reproaches that have been cast upon it by different writers, it still maintains its place in the estimation of enlightened practitioners; and there can be no doubt that it is more frequently applicable than any other plan yet devised." He has not in his later works, to my knowledge, materially altered his views.

Dr. J. W. S. Gouley, a careful and experienced operator, states in his work upon this subject: ‡ "I only resort to internal urethrotomy in *intractable strictures* of the ante-scrotal portion of the canal. . . . Success depends more upon the skill of the surgeon than upon the instrument he uses. Hæmorrhage is apt to follow deep incisions; likewise infiltration of urine, abscess, and *pyæmia* may supervene upon the *merest scarification*." (The italics are my own.)

Professor William H. Van Buren, in his late work, § thus expresses the results of his experience: "Cutting operations are growing daily in favor, yet, in the case of uncomplicated stricture, no matter how tight it may be, provided it does not prove resilient and is not of traumatic origin, if any instrument at all can be passed, dilatation is still the best method of treatment."

---

* "Jacksonian Prize Essay on Stricture of the Urethra," London, 1854, p. 178.

† "Treatise on the Urinary Organs," Philadelphia, 1855, p. 778.

‡ "Diseases of the Urinary Organs," New York, 1873, pp. 83, 93.

§ "Treatise on the Surgical Diseases of the Genito-Urinary Organs," VAN BUREN and KEYES, New York, 1874, p. 158.

Mr. William Acton* concurs in these statements, as follows: "Dilatation is the plan of treatment the most generally applicable, and which most frequently succeeds."

Professor E. L. Keyes, in the latest work which has appeared upon this subject,† says: "Deep-seated strictures should not be cut internally, for the double reason that, (1) Cutting in this region is a proceeding dangerous to life; (2) cutting in this region does not effect a radical cure."

It seems unnecessary to further quote authorities to sustain the first objection that I raise, viz., that *the frequent employment of internal division of strictures is unnecessary, since other means can be generally employed.* Such universal condemnation of the unrestricted use of an operation that has long been before the profession, and which has had in the past its full share of criticism and support, would seem sufficient to the medical reader of the present day to establish this proposition, were not elements at work which have fanned the flame, and once more threaten the abuse of an operation which is valuable only within its proper limits, and consequent injury to many of its prospective subjects. Let us examine, therefore, in discussing this question: 1. What are the elements of its present popularity? 2. What are its dangers? 3. What are its benefits?

A. ITS ELEMENTS OF POPULARITY.—It would be an injustice to the valuable researches of one of our own city‡ to fail to recognize that largely by his efforts in the past twelve years has internal urethrotomy been pushed to the front in this country as an improvement upon dilatation in the treatment of urethral stricture. Too much credit can not be given to him who has done so much to prove that the normal urethral caliber has been greatly under-estimated, and that an approximate relation exists between the circumference of the penis and that of its canal. He has shown great ingenuity in devising instruments; and a proper appreciation of existing urethral conditions can perhaps be gained better by his methods than by those previously existing. I can not, however, refrain from quoting the following passage from a work which has lately appeared,* with which I am in the fullest accord: "I have raised my voice for what it may be worth in protest against the views of the new school in urethral pathology, which seems to claim that every natural undulation in the tissues of the pendulous urethra is a stricture fit for cutting, and that all the ills of the genito-urinary passages may be accounted for by the existence of these undulations, and usually made to disappear when the latter are cut. The theories of the new school are as ingeniously perfect as the instruments which carry them out; but, unfortunately, its claims seem to leave out of view that the disease for which the patient seeks relief is only a symptom; and that such symptoms may be due to a variety of causes. What will cure a symptom in one case, will not necessarily do so in another. And a serious criticism upon the methods of the new school is that it does not generally, in its list of published cases, give any prominence to those cases which *have been cut without relief* of the symptoms complained of." (The italics are my own.)

---

* "Treatise on the Diseases of the Urinary and Generative Organs," New York, 1853, p. 96.

† "Venereal Diseases," New York, 1880, p. 305.

‡ Professor F. N. OTIS, "Treatise on Stricture," New York, 1878.

I can not myself agree with the advocates of this school that a meatus which is not accompanied by pockets on the upper or lower wall of the urethra should ever be divided to permit the introduction of instruments which shall correspond in point of size with the somewhat arbitrary measurement of the capacity of any individual urethra; nor have I ever been convinced that a radical cure of the stricture is always insured by the urethrotome, or that the symptoms do not, in a certain proportion of cases, remain after the operation, unless treatment by other methods is used in conjunction. Unless these two latter tenets can be fully maintained, the urethrotome must be considered as capable of being *judiciously used* only in a somewhat restricted number of cases. The chief advocate of this operation has himself, I think, met with a few cases in latter years where his operation (performed by himself) has been followed by a *return of the stricture;* and many where certain symptoms for which the operation was performed were not relieved.

---

* Keyes, *op. cit.*

The use of the dilating urethrotome has been popularized by the claim of its advocates that it surpasses in its results the treatment of stricture by dilatation, in the following respects: 1. That it accomplishes, what other operations do not, a *radical cure* of stricture; 2. That it relieves certain symptoms far more effectually and rapidly than any other method of treatment; 3. That it is easily and quickly performed, when the details in the use of the instrument have been mastered; 4. That it is comparatively free from danger. These points summarize, in a general way, the main arguments in its favor which the profession are asked to accept; and it is not to be denied that the propositions, as above stated, have met with a more ready acceptance than the facts, in my opinion, seem to warrant.

Within the last few years the chief advocate of this method has been able to publish between *six* and *seven hundred operations* of his own (although details were given in only 236 cases), and *nearly as many more* which have been compiled from the case-books of two or three of his supporters (Pease, Brown, and Mastin). (Italics my own.)

Such an enormous number of operations—over 1,300—from so few sources, would in itself suggest that, if the operation has been justified, the general public has in the past been wofully neglected by the surgeons. But, when we take into consideration that the instrument makers are selling this instrument to nearly every new graduate in medicine, who are often only too anxious to test its merits and equal their predecessors in the number of cases reported, the conservative element may well question if by its indiscriminate use surgery is not rapidly being brought into disgrace, and if those who are now the advocates of the indiscriminate use of this operation will not, in time, regret the haste with which they accepted or prejudged its merits.

B. ITS ELEMENTS OF DANGER.—Internal urethrotomy has been followed, from the statistics of collected and reported cases, by the following bad results: 1. Death from uræmia; 2. Death from pyæmia; 3. Death from shock; 4. Infiltration of urine; 5. Peri-urethral abscess; 6. Severe hæmorrhage; 7. Cystitis; 8. Epididymitis; 9. Urethral fistulæ; 10. Deformities of the penis; 11. Impotence; 12. Atrophy of the penis; 13. Gangrene of the penis; 14. Prostatic abscess; 15. Acute urethritis; 16. Gonorrhœal rheumatism; 17. Phlegmasia alba dolens.

Before considering these results in detail, let us fortify our opponents by the published results of their own cases, which are supposed to support their views, and encourage others to subject future patients to a like proceeding when any diminution in the urethral caliber, no matter how slight, can be detected. Dr. Otis, in 1875, published his first hundred cases. An analysis of these cases shows the following accidents to have arisen:

Hæmorrhage	in 4 cases.
Rigors	" 6 "
Deformities of the penis from curvature	" 3 "
Prostatic abscess	" 3 "
Diphtheritic exudation	" 8 "
Retention of urine	" 1 case.
Necessity for perineal section after operation	" 1 "
" " aspiration of the bladder	" 1 "
Acute urethritis	" 2 cases.
Gonorrhœal rheumatism	" 1 case.

No deaths were recorded.

In the second series of cases (one hundred and thirty-six in number), published in his work,* the following accidents occurred:

Hæmorrhage	in 8 cases.
Rigors or urethral fever	" 11 "
Suppression of urine	" 1 case.
Deformity of the penis from curvature	" 6 cases.

He also reports *two fatal cases* where the dilating urethrotome was used in connection with perineal section, and *two others* where internal urethrotomy was alone performed.

One of these patients died of *pyelo-nephritis* and *renal abscess* on the 16th day.
The second died of *suppression of urine* and *uræmia* on the 3d day.
The third " " " " on the 6th day.
The fourth " " " " on the 8th day.

Professor Pease, of Syracuse, reports a freedom from *accidents* which is rather remarkable, even when compared with the cases above recorded, but he still acknowledges to have had one severe case of urethral fever and two cases of severe hæmorrhage.

---

* Otis, *op. cit.*, pp. 311, 317.

It may strike those who attempt to analyze the reported cases of Dr. Otis, Dr. Pease, Dr. Mastin, Dr. Brown, and other advocates of the dilating urethrotome, that hæmorrhage is not more frequently reported, but a foot-note in Dr. Otis's volume, on page 280, explains that "hæmorrhage is not enumerated as one of the accidents, unless, *in spite of ordinary measures* used to control it, an excessive quantity of blood is lost." (The italics are my own.) If "ordinary measures" mean the urethral tube, the cold-water coil, the perineal crutch and tourniquet, etc., perhaps to others unprovided with these appliances a hæmorrhage might occasion anxiety, which to them would seem trivial.

It seems also, from the published statement of Dr. Otis, page 277, that cases operated upon by him for other surgeons have not been included in his list of reported cases. This is to be regretted, as I have received from others during the last few years general statements of bad results, which are of course useless as scientific facts, but which should have been given to the profession, if the volume was to embody all the facts, and thus enable physicians to judge intelligently of the demerits as well as the merits of the operation.

It would seem that I am not alone in this opinion. Dr. Sands, in a pamphlet (1879), facetiously remarked that "it was sometimes hard to reach fatal or disastrous cases, which were often considered a kind of private property of the owner." In our city hospitals cases have occurred within the last few years which have been followed by serious consequences, if the personal statements of others can be relied upon, but I find no published record of many whose details would be of value. Dr. Keyes, in a passage previously quoted from his latest work, seems to convey the impression that, in his opinion also, the reports of the cases operated upon with the dilating urethrotome do not fairly represent the dangers which may ensue. Until more care is exercised in the recording of hospital cases, and until, in some way, they can be published in full for professional inspection, it will be more than difficult to accumulate accurate statistics of any of the *laeer methods* of treatment. It has proven difficult with myself to find a sufficiently large list of cases upon which the dilating urethrotome has been employed, to properly verify the frequent occurrence of the other dangers which have been mentioned as liable to happen. But, as the new instrument only insures a more reliable and possibly as deep an incision as those of Civiale, Maisonneuve, Voillemier, Charrière, Reybard, Peters, and the host of others, the unfortunate results even of the distant past can still be justly regarded as a guide for the future; since no element has been introduced by the "new school" to lessen the possibility of danger.

Although, in these three hundred cases reported by Dr. Otis, but four cases of death have occurred, still fatal results have been known to follow this later method of treatment, in a relative proportion which is vastly greater, where the operation has been performed by skillful hands.

Professor Sands, of New York, in a pamphlet published in 1879, says: "I have heard of *a number of cases* where death has resulted from the employment of the dilating urethrotome. . . . I can state with authority, however, that *three fatal cases* of operation with the dilating urethrotome have lately happened in our city hospitals, two of which occurred last week in one hospital. . . . In two of these cases death took place from *pyæmia within a week* of the operation. In the third case, death occurred from *uræmia* on the sixteenth day after the operation, which was performed for the division of an anterior stricture which was so slight as to be detectable only with a bulbous sound, No. 24 F." (The italics in these quotations are mine.)

Mr. Berkeley Hill * summarizes the results of sixteen cases operated upon by him with the dilating urethrotome as follows: The *operation was serious* in two instances. One patient had *alarming hæmorrhage*. Three had *severe rigors*. In eleven cases the *gleet persisted*. *Abscess of the buttock* appeared in one. *Orchitis* appeared in one. In only *five* was the *operation successful*. In four, bleeding continued for several days. (Italics my own.)

---

* "The Lancet," April 8, 1876.

It is but just to Dr. Otis, as the chief advocate of this method, to say that he explained, in a later publication,* certain facts which may have accounted for the bad showing, but, if the operation is unsafe in the hands of good surgeons, unless specially experienced in its performance, is it not proper that the general profession be warned against attempting it?

Let us look again at other results of this method, as reported, before we investigate the previous results of urethrotomy.

In Dr. Sands's pamphlet † the following passage will be found: "I have frequently seen the operation of slitting the meatus carried to such an extent that the patient was unable to project the stream of urine in a natural manner; and I know of a case in which an eminent surgeon was obliged to perform a plastic operation to restore a meatus that had thus been destroyed. I have seen, in consultation, persons who have suffered from troublesome hæmorrhage, varying in duration from a few days to a month, in consequence of having been cut with a dilating urethrotome."

In 1876, as I am informed, a case was operated upon in one of our hospitals, which resulted in internal hæmorrhage, which completely filled the bladder, and the expulsion of eighteen ounces of clotted blood took place on the withdrawal of a catheter of large size, some days after the operation. The patient recovered, but the stricture returned within a few months. In 1870 I myself witnessed an operation in one of our hospitals, with which I was at the time connected, which resulted in gangrene of the penis, due to infiltration of urine, and which was followed by death.‡ In 1876 I performed division of a stricture which was too firm to admit of dilatation, and the patient died of total suppression of urine in sixty-seven hours after the operation. I had many months previously performed the same operation upon him without any bad symptoms following, but the stricture had returned to even a worse condition than when first seen.§

---

* "The Lancet," June 3 and 10, 1876.

† "A Reply to Dr. Otis," New York, 1879.

‡ "Bellevue Hospital Reports," 1870.

§ "The New York Medical Journal," May, 1880.

Dr. Banks, in his report of three fatal cases after attempts to pass an instrument through very tight strictures, attributes the accident chiefly to shock, since uræmic symptoms were absent; * but it is a question, as the instruments passed were of very small size, and therefore of necessity *sharp at the point*, if in at least one of the cases some injury was not done to the urethra differing but little from an incision. Within the last year I saw in consultation a case where atrophy of the penis and impotence appeared after internal urethrotomy, followed by severe hæmorrhage; but I am not prepared to say that it was attributable to the operation, although no other cause could be ascertained, and the patient had, previous to the operation, been in good health, excepting in regard to the frequency of micturition.† He has since died of renal disease. In two fatal cases reported by Bumstead,‡ the strictures were situated at about four inches from the meatus, and death ensued from septicæmia in four and fourteen days, respectively. In these cases the Otis urethrotome was employed. Dr. Briddon § reports a case of death from internal urethrotomy, performed with the instrument of Maisonneuve, as a result of suppression of urine. Renal disease, however, existed prior to the operation.

One of our leading surgeons lately lost a patient, in hospital practice, after internal urethrotomy. The details of the case have not been published.

Another well-known surgeon of this city lost a patient in another hospital, after an operation with a Maisonneuve instrument. M. Guyon, of Paris, in the published results of internal urethrotomy in 1876, 1877, 1878, reports one case of death in a total of fifty-two cases, but he has since reported a total of two hundred and fifty cases, with seven deaths.

Mr. Prescott Hewett,‖ in 1863, reported a case of death from suppression of urine, following instrumental manipulation which drew blood. Mr. Teevan ¶ reports, in 1876, three cases of death in the Hôpital Necker, following internal urethrotomy. Leroy d'Étiolles, in reviewing Reybard's cases, reports having witnessed two fatal cases at the Hôtel Dieu, and one case of the most alarming hæmorrhage, which caused serious doubts as to the patient's recovery.* Dr. Gouley reports a fatal case, and one in which thrombus of the iliac vein and phlegmasia dolens followed the operation of internal urethrotomy. Dr. Otis, † as before stated, reports four cases of death as occurring in his own practice. Three of the patients died on the third, sixth, and eighth days after the operation, of suppression of urine and uræmia, while one died on the sixteenth day of pyelo-nephritis and renal abscess. In two of these cases, however, perineal section was combined with the use of the dilating urethrotome; so that an additional source of danger existed.

---

* "Edinburgh Medical Journal," June, 1871.

† "The New York Medical Journal," May, 1880.

‡ *Op. cit.*, p. 809.

§ "The Medical Record," March 6, 1880.

§ "The Lancet," 1868, vol. ii.

¶ Ibid., 1876.

It seems, from collected statistics, that sixty-six deaths are already verified as the result of internal urethrotomy, and that the possibility of the other dangers enumerated as liable to follow this operation is supported as well by Professor Otis's reported cases as by the opinions of those against whom the claim of prejudice might be urged. I can not refrain from quoting the following sentence from the article of Mr. W. Mitchell Banks,‡ commenting on the dangers of the use of instruments within the urethra: "When a patient, the victim of some grievous malady which is hurrying him to certain death, prepares to submit to a hazardous operation for its relief, both he and the operator have weighed the chances of the operation over and over again. If the operation succeed, it is a triumph to both; if it fail, the surgeon can console himself with the fact that he did all that his skill enabled him to do, while he may derive, from his very failure, practical experience which may guide him to happier results in the future. But it is a very different matter when a man, perhaps in the prime of life, and, with the exception of a mere local ailment, in good health, lies down upon the consulting-room sofa or the hospital bed, submits to a comparatively simple operation, has a rigor, and is dead within twenty-four hours. That such is not an overdrawn picture the case just narrated proves; and the melancholy feature is that, in spite of all ordinary precautions, we can not always guard against such accidents."

---

* WADE, "On the Treatment of Stricture," London, 1860.

† *Op. cit.*, p. 311.

‡ "Edinburgh Medical Journal," vol. xvi, 1871, p. 1078.

I am well aware that such fatal accidents can not be used as evidence that the operation of internal urethrotomy should not be performed. All surgical operations have a percentage of risk that the patient and the operator should both appreciate. But the point which this portion of the paper aims to impress upon the profession is this, viz.: *That the operation of incision into the walls of the urethra greatly increases the percentage of danger, when compared with the results of dilatation; and that the proportion of those complications which have been enumerated to the total number of patients cut is relatively greater than is usually supposed.*

It is difficult to obtain the percentage of danger in the treatment of strictures by dilatation, as any form of complication is extremely rare—so rare, indeed, that the twelve deaths from catheterism, reported at different times in the leading journals, would be lost sight of in the thousands of cases in which relief has been afforded the patient without any unpleasant consequences having arisen. I can state that, within the last ten years, I have treated at least two hundred cases of marked stricture by dilatation alone, and that I have never known but five cases where a chill, abscess, orchitis, or other complication occurred. Possibly my results have been unusually fortunate, but I think the statistics, if all the cases of successful dilatation could be gathered together, would show the percentage of danger reduced almost to the minimum; that the process of dilatation, if gently and skillfully practiced, will relieve most of the cases; and that the symptoms will be arrested without anxiety to the surgeon or the patient.

(*To be concluded.*)

PILOCARPIN IN INTERMITTENT FEVER.

By GASPAR GRISWOLD, M. D.

In spite of ingenious and plausible hypotheses at different times advanced, and at first more or less enthusiastically supported, the pathology of intermittent fever is not yet understood. Clinical observation, however, has established many points in connection with it; among others, the following:

1. That an intermittent fever, at first devoid of immediate danger, may become pernicious.
2. That the tendency to relapses is less after attacks which have been quickly broken up than after those which have been allowed to continue until a considerable number of paroxysms have been experienced. Indeed, it is a matter of popular observation that after the "system of an individual has been well saturated with malaria," as the phrase is, he may have a chill at any time, without additional exposure in a malarial district, but merely as a result of overwork, anxiety, or some other depressing influence brought to bear upon him.
3. That an ordinary intermittent fever may prove remotely serious, if it continue long, or if it recur frequently, by inducing constitutional deterioration. It is stated by many authors that well-marked malarial cachexia is often observed in patients who have never experienced any fever, but have merely lived for a number of years in malarial districts. These statements, based upon histories obtained from the patients themselves, are certainly open to question.

Our idea of fever has become more distinct and better defined since the thermometer has come into general use, and it has been developed that subjective testimony in the matter is far from being reliable. In intermittent fever, especially, there seems to be a remarkable tolerance of high temperature, patients reporting themselves well and comfortable in whom the thermometer reveals a temperature of 104° F. Perhaps this is explained by the fact that most people suffering from malaria are sensitive to cold, going about with dry skins in spite of wearing much thicker clothing than is required by healthy persons; since they are always dreading a chill, shrinking from the least current of cool air, a temperature which would be recognized as febrile by any one in health is to them reassuring, and comfortable by contrast with their fears. Many cases, which have for a long time passed for so-called irregular and non-febrile malaria, are finally shown by the thermometer to be intermittent fever in which the cold stage of the paroxysm is not well marked, and the occurrence of a hot stage is denied by the patient. The therapeutic significance of this fact seems to warrant illustration by the following case: A gentleman presented himself at my office, complaining of having for some time past suffered from loss of appetite, disinclination to exertion, and severe attacks of headache which seemed periodic. He denied having had chill or fever for more than a year; and, on being questioned somewhat closely, answered with an injured air that he *thought he knew whether he had had fever or not*, also stating that he felt his headache coming on at the time, and that I could see for myself that there was no fever accompanying it. To be perfectly sure, I took my patient's temperature with a thermometer, and astonished him not a little with the fact that it was 103·5° F. Subsequent observation proved the case to be one of ordinary intermittent fever, which had escaped detection, alike from the absence of a distinct chill and from the patient's failure to appreciate that he had fever.

In view of the fact that such cases are very common, it is obviously important not to be too easily prejudiced by the patient's account of himself; and the question unavoidably presents itself: Is there anything about the so-called characteristic malarial cachexia which might not be the result of frequently recurring pyrexiæ? Who has not seen anæmia, lassitude, and anorexia develop in the course of a dozen successive tertian paroxysms, the patient losing weight and requiring months, even years, for entire convalescence? Happily, in these days, cases more frequently present themselves in hich energetic treatment at once restores the patient to ealth by cutting short the fever at the second or third parox- m. The conclusion seems almost unavoidable, that in many ses an obscure periodic fever, masked by other symptoms, and undetected by a physician misled by his patient's statements, is the agent producing cachexia; and that this might be prevented by early thermometric recognition and prompt suppression of the febrile element. It would, perhaps, be too sweeping to assert that the malarial cachexia could not develop without fever; but it is safe to say that fever is present in a great many cases in which patients confidently testify to its absence, and that it is rare indeed to find any manifestation, clearly malarial and evincing distinct periodicity, which the thermometer will not show to be attended with a rise of temperature.

4. That to prevent the development of a single paroxysm is to diminish the tendency to the occurrence of successive ones; and that in a large proportion of cases such prevention of the development of a single paroxysm is sufficient in itself to bring about a cure, and, failing of this, is at least a most powerful adjuvant to constitutional treatment. It is, then, of the utmost importance to cut short an attack of intermittent fever at once, causing the first paroxysm to abort, if possible, or, at least, preventing the occurrence of a second or third; and this is so for four reasons: (*a*) that the fever may not become pernicious; (*b*) that the tendency to relapses in the future may be less; (*c*) that the cachexia may not have time to develop; (*d*) because the fever is in this way more easily and thoroughly cured.

The salts of quinia are considered specific in malarial affections, and their efficacy is beyond question, but in many cases they do not act promptly enough. What is needed is an agent that will antagonize the essential conditions of a chill at once; which, given during a chill, will cut it short, and which, given just as a chill is threatening, will prevent its occurrence. That the profession has felt the want of such an agent is well attested by the long array of measures which have been proposed for the purpose. Sinapisms all over the body, the application of tourniquets to the limbs, cups (wet and dry) to the spine, the full administration of alcohol, narcotic doses of opium, and drachm-doses of chloroform internally, are some of them. These methods either have proved so uncertain, or involve so much discomfort, that at the present day treatment of the paroxysm is nearly always merely palliative, being simply an attempt to make the patient as comfortable as possible while he is passing through the different stages.

The essential conditions of a chill are a small, hard pulse, peripheral anæmia, and convulsive muscular contractions. Pilocarpin relaxes arterial tension, causes a determination of blood to the surface, and in the progress of the diaphoresis induced by it brings about muscular relaxation. It is easy to see how pilocarpin, sending the blood to the surface and causing diaphoresis within two or three minutes from the time of its hypodermic administration, can quickly dispel the blue, shrunken appearance of the skin and cold, creeping sensations which are about to usher in a chill; just as nitrite of amyl, dilating the cerebral vessels, prevents the epileptic seizure which their spasmodic contraction is on the point of causing.

To subject this reasoning to a clinical test, six cases of malarial intermittent fever were selected.* Each patient was carefully watched at the time when his paroxysm was due, and two or three minutes after the chill had fairly begun gr. ⅛ of the muriate of pilocarpin was administered hypodermically. The patient's temperature was then taken every thirty minutes for the next four or five hours. The results were as follows: 1. In all but one case the chill stopped within two or three minutes after the pilocarpin was given; and the paroxysms aborted, terminating in the sweat caused by the medicine—no hot stage occurring. In the remaining case, the patient was a very large man, and the dose administered did not produce marked diaphoresis; the chill was not interrupted, although its severity was diminished, and the pains in the back and loins disappeared. A hot stage occurred, but was shorter and less intense than that of the preceding paroxysm. Perhaps a more profuse diaphoresis might have been successful in this case, as it was in the others. With this idea it was proposed, in case another paroxysm occurred, to give a larger dose of pilocarpin; unfortunately for the settlement of this uestion, if not for himself, the patient recovered without havng another chill. In one of these cases quinine also was given; in the others pilocarpin was the only remedy. 2. In all the cases recovery followed the administration of a single dose of pilocarpin; in no instance did another chill occur. In a seventh case small doses of quinine (five grains three times a day) were prescribed; a chill, threatening to develop, was anticipated and prevented with pilocarpin. Convalescence was established without the occurrence of another paroxysm.

---

* For a full account of these cases, see my article on this subject in "The ledical Record," August 16, 1879.

From these cases it seems fair to conclude: 1. That the muriate of pilocarpin, administered hypodermically, will promptly cut short the chill of malarial intermittent fever. 2. That in a large proportion of cases so treated the paroxysm aborts, terminating in the sweat caused by the pilocarpin, there being no hot stage. 3. That such abortion of a paroxysm is in itself sufficient to effect a cure in many cases. 4. That such abortion of a paroxysm is a valuable adjuvant to treatment with quinine during the intervals. 5. That a dose of pilocarpin sufficient to produce this effect acts gently, without causing exhausting diaphoresis or unpleasant ptyalism. 6. That the promptness with which an adequate dose of pilocarpin interrupts a chill is suggestive of its possible efficacy in cases of pernicious intermittent fever, where prevention of the full development of a paroxysm is often of the first importance.

It will be observed that in all but one of the preceding cases the medicine was administered *during the chill.* I have more lately been able to study seventeen cases in which pilocarpin was given *before the chill*, with a view to preventing its occurrence. In five of these the remedy was administered hypodermically; diaphoresis resulted in from two to five minutes, and in every case the chill was prevented. In one of these cases a second dose was required two days afterward, which was again successful. Quinine was given, in three instances, in small doses (three to five grains three times a day). In the twelve remaining cases the muriate of pilocarpin was given by the mouth. In two instances the medicine failed to act, no diaphoresis being produced; in these cases the impending paroxysms were not prevented, but went through their usual course. In ten instances diaphoresis, more or less marked, resulted in from ten to twenty minutes after the pilocarpin was taken; in all these cases the paroxysm was averted. In three of these twelve cases, including the two in which no diaphoresis was produced, it was found necessary to use pilocarpin again. About half of the twelve patients took quinine.

Administered hypodermically, the drug acts more surely, more rapidly, more evenly; the dose required varies between gr. $\frac{1}{5}$ and gr. $\frac{1}{6}$, according as the patient is large or below medium size. The following solution may be used:

℞ Pilocarpiæ muriat., gr. j.
Aquæ destill., ʒj.
M. Sig. ♏x = gr. $\frac{1}{6}$.

Like similar solutions of other alkaloids, this one begins to lose strength, and is no longer reliable, after standing two or three weeks in a warm room. One-grain powders of the drug may be kept for an indefinite time, put up by the druggist in a manner to prevent deliquescence; the above-mentioned solution can then be made fresh as occasion may require.

If the patient objects to hypodermic medication, or if circumstances render this method of administration inconvenient, the remedy may be given by the mouth, and yet act efficiently. In this case the dose will vary between gr. $\frac{1}{4}$ and gr. $\frac{1}{5}$. It is best given in powder, as follows:

℞ Pilocarpiæ muriat., gr. j.
Sacch. lactis, gr. xxv.
M. Div. in chart., No. V.

These powders may be given to the patient, with directions when to take them.

To prevent the occurrence of a chill, pilocarpin should be given hypodermically about fifteen minutes before the time when it would commence; if given by the mouth, an interval f half an hour is desirable, on account of the slower action the drug when administered in this way. In cases where stinct prodromata, with which the patient is familiar, enable m to predict a chill, these will indicate when the medicine ould be taken. In cases where there are no prodromata, it will be necessary to approximate, judging from the hours at which preceding chills have occurred. In those instances in which paroxysms come on at odd times, without any regularity, the patients may be advised to carry powders about with them, taking one whenever an attack seems impending. It is in this last class of cases that the administration by the mouth is especially convenient; the patient can have always with him a remedy which he can use at a moment's notice.

It is well to assist the action of the pilocarpin with warm coverings and a warm drink; it is noticeable that unpleasant salivation is least apt to occur in those cases in which diaphoresis is prompt and easy. Should the sweating cause the patient to feel cold and fatigued, a stimulant may be administered with propriety. In one case, in which profuse diaphoresis continued longer than was desirable, it was checked promptly and without unpleasant symptoms with atropiæ sulphat. gr. $\frac{1}{60}$, administered hypodermically.

The advantages of this addition to the therapeutics of intermittent fever are sufficiently obvious. The physician, called to a patient in a chill, can at once give him relief. If the chill has just begun, the administration of pilocarpin will in most cases cause the paroxysm to abort, there will be no hot stage, and the patient will escape the exhaustion incident thereto; if the chill has been in progress for fifteen or twenty minutes before the pilocarpin is given, it will be cut short, and many of the patient's disagreeable sensations dispelled; but some fever will generally follow—this, however, will not range so high nor last so long as it would have done without treatment. In either case the tendency to the occurrence of another paroxysm will be much less than if the first had been allowed to run its course without interruption. Quinine may now be given, but need not be pushed to the induction of absolute cinchonism; for, if another chill should threaten to occur, it could with certainty be prevented with pilocarpin. In this way the patient escapes the unpleasant effects of large doses of quinine, the fever being none the less effectually cut short at once; paroxysms not being permitted to occur, exhaustion is avoided, and convalescence is easy and rapid. In cases where quinine, through idiosyncrasy, is contraindicated, it may be left out of the treatment altogether, and entire reliance be placed upon pilocarpin. A large majority of cases of intermittent fever terminate without further treatment after the thorough abortion of a single paroxysm with pilocarpin; very few cases indeed, not five per cent., will continue long enough to require a third use of the remedy. One great advantage is that pilocarpin need not be used blindly; it is required only when a paroxysm is felt to be on the point of developing. If this necessity for the medicine does not present itself, the patient may be spared the inconvenience of taking it.

The power of pilocarpin to cure intermittent fever entirely, by simply anticipating and preventing the occurrence of one or two paroxysms, is greater and more striking than will easily be believed by those unaccustomed to its use. I have histories of four cases which had already resisted quinine and other approved anti-malarial remedies for periods varying from two to four weeks, but which terminated after the decisive control of a single paroxysm with pilocarpin. The most recent of these recoveries took place three months ago, yet a relapse has not occurred in a single instance.

Vague and ill-defined malarial manifestations, headaches, neuralgiæ, etc., are very successfully treated by the administration of pilocarpin a few minutes before the time for their occurrence; the effect will be most satisfactory when the disturbance in question is attended with some rise of temperature, and is distinctly periodic.

No good results seem to follow the administration of pilocarpin during the hot stage; its efficacy appears to be limited to its power to prevent or break up that primary disturbance of the circulation which ushers in a paroxysm. It acts quite as well, however, in cases where the cold stage is not marked, if it is given early enough to produce diaphoresis before the fever is well declared.

After having witnessed its administration in nearly a hundred cases, the author feels justified in asserting that, in the doses required in intermittent fever, the action of pilocarpin is unattended with danger or discomfort; this assurance is certainly not superfluous, in view of the fact that many good authorities hold that its use in uræmic coma and convulsions (in which connection it is most familiar to the profession) has been followed by serious cardiac depression and pulmonary œdema.

THE ANTISEPTIC TREATMENT OF EMPYEMA.*

By A. T. CABOT, M. D.,
SURGEON TO THE CARNEY HOSPITAL, BOSTON.

The treatment of empyema by the establishment of a free opening and ample drainage of the chest, with full antiseptic precautions, is accepted by the profession at large more slowly, I think, than its merits deserve. The reasons for its tardy adoption are mainly two: First, many physicians believe that by drawing off the pus with the aspirator they may attain a cure, while exposing the patient to less risk than with a free opening; and, secondly, the care and attention to detail required for the successful carrying out of the antiseptic precautions are so irksome to a busy and hurried practitioner that he is not willing to submit to the annoyances of the method until its advantages are demonstrated beyond all question. I hope this paper may assist somewhat in the exhibition of these advantages.

Before proceeding to the consideration of cases, I wish to say a few words concerning this method of treatment. I do not propose to describe at length the precautions to be taken, as the details of antiseptic surgery are fully given in many hand-books and special articles. Of one or two points, however, bearing particularly on this class of cases, I wish to speak.

Much has been said and written against the spray, and many surgeons are inclined to dispense with it. Dr. Stimson, of New York, has even published some experiments which have led him to conclude that it is a useless adjunct to an antiseptic operation. I am inclined, however, to differ with Dr. Stimson upon this point, and, though I can not detain you with a criticism of his experiments, I will give, shortly, my

* **Read before the Massachusetts Medical Society.**

reasons for thinking the spray of value, and especially useful in the operation we are considering.

The action of the spray is twofold: First, it furnishes a fine shower of a strong antiseptic solution which thoroughly wets the parts to be operated on, the hands of the surgeon and assistants, and all instruments brought into proximity with the wound. If a particle of dust carrying germs of putrefaction falls upon any of these parts, it falls into an antiseptic solution and is soon covered by more of the same, and the germs are quickly destroyed. In ordinary operations this is, I think, the most important action of the spray. In this operation, however, another property, even more important, is to be considered.

Tyndall, in some of his lectures, blew air through cotton-wool, thus sifting from it the contained atoms; and, projecting this filtered stream of air upon a sunbeam made visible by the dust suspended in it, he cut a black swath across its track with his blast of purified air, which displaced the dusty air before it. Now, in the atomizer we have a contrivance by which we can displace, in similar manner, the air containing dust, and substitute for it a pure vapor strongly impregnated with an antiseptic; and it is by thus *displacing* impure air that the spray is of use, not, as has been sometimes thought, by *destroying at once* germs floating through it.

It is important, then, when the chest is opened and the air rushes in and out with respiration, that the spray should be carefully watched to see that it throws a good stream well directed against the opening, so that this purified vapor alone shall enter. A steam atomizer should always be used for this purpose, as the stream is more steady, and the steam is absolutely free from germs, which would certainly be present in the air thrown through a hand atomizer.

For drainage tubes, I think it of advantage to have two, lying side by side, and just long enough to reach through the chest wall. If, then, one is clogged by coagula, the other will conduct away the discharge. They are convenient, too, if it is necessary to wash out the chest. Professor Lister, in a recent lecture, states that he never washes out the chest, and does not consider it advisable. If an operation is carried out antiseptically, it is certainly unnecessary to wash out the cavity to render it aseptic; it is already so. But I have thought that I gained time in the recovery by washing out the large coagula, which otherwise would have left the chest with difficulty, if at all. For this purpose I use a one-per-cent. solution of carbolic acid. In preparing this solution, care should be taken that it be mixed at least ten minutes before it is used, as this length of time is required for the carbolic acid to render inert the germs contained in the water with which it is diluted. If, as in the case of a young child, it seems best to avoid the use of carbolic acid, chlorinated soda may well be substituted for it.

The drainage tubes must be fastened securely to prevent their escape into the chest, and care must be taken that the dressing does not press upon their ends in such a way as to hinder the escape of the pus. I have accomplished this by rolling a loose piece of gauze into a ring and laying it around the ends of the tubes.

The outer dressing must be considerably more abundant than in other regions, as the constant motion of the chest wall favors the flow of the discharge through them. They may be secured in place with a flannel bandage, which Professor Lister supplements with a rubber bandage to keep the edges of the dressing in close contact with the skin. This I found very useful in two of my cases.

Great care must be taken in the application of the mackintosh, for a reason which I will now explain. If this water- and air-proof layer is carefully adjusted so that its edges overlap the gauze beneath it, it will be held most closely applied to the skin. Now at every cough, sneeze, or other forcible expiration the air will be driven out from under this edge, which acts then as a valve to prevent its return. You thus have the air in the pleural cavity constantly diminishing, and so a slight suction power is exerted upon the lung, favoring its expansion. To this mechanism I ascribe the very rapid expansion of the lung in these cases, the importance of which in obliterating the abscess cavity is manifest.

In operating, I explore the chest in the selected spot with a grooved needle, and if pus shows itself I then run my knife down the groove and immediately make the required incision. In this way the knife follows the track of the exploring needle, and, finding the pus in the quickest way, makes a straight, clean opening into it. Before withdrawing the needle, I slide in a director, which I keep there till the pus is out, and the tubes are in place. When the patient is not etherized, this procedure greatly shortens the painful part of the operation.

To illustrate the advantages of this method of operation and dressing, I will briefly report four cases—three of them in my own practice and one treated by Dr. J. B. Swift.

Case I.—J. K., a girl of eleven, entered the Carney Hospital in the middle of March, 1879. Her illness dated from February 9th, at which time she began to lose her appetite and strength, and to have some dyspnœa. This shortness of breath had troubled her constantly since then, though at no time very severe. Shortly before her entry, a physician had tapped the right side of her chest with an aspirator, and had drawn a small quantity of pus. At the time of her entrance, her right side was flat on percussion, except at the apex, where the note was high-pitched. Respiration and voice were absent over the flat portion. *March 20th.*—Ether was administered, and an opening was made in the eighth intercostal space, beneath the axilla. The precautions which I have described were observed during the operation and subsequent dressings. There being many fibrinous clots, the chest was syringed out with a one-per-cent. solution of carbolic acid.

For the first few days, the dressing was changed every twenty-four hours; after that, once in two or three days. On the second day the temperature was normal, and it never rose above this during the subsequent progress of the case. After the second dressing the discharge was purely serous, and had almost wholly ceased at the end of the first week. At the third dressing good vesicular respiration, with a few râles, could be heard to the base of the chest on the back and to the level of the opening on the side. On the ninth day I took off the dressing, meaning to remove the tube, but found that it had torn away from the safety pin and had escaped into the chest. On the following day, having procured a suitable pair of long curved forceps, I etherized the child, and after quite a protracted search succeeded in removing the tube. During this search, about two fluidounces of clear serum escaped from the chest. Another tube was inserted and fastened by a silk ligature to the adhesive plaster, as well as held by the safety pin. No rise of temperature or other ill effect followed this exploration of the pleural cavity, and a week later, on April 6th, the tube was finally removed, and the opening quickly closed. With the exception of a slight dullness below the point of opening, the sounds upon auscultation and percussion were perfectly normal.

For the history of the next case I am indebted to Dr. Knight and Dr. Amory, under whose care the patient was.

CASE II.—J. M., a strong man of twenty-nine, was always well until September, 1879, when, being run down by close application to business, he developed a pneumonia of the right lower lobe. This confined him to the house for fourteen weeks, after which he returned to his business, but continued to be troubled by cough, with slight dyspnœa. He went South, but was immediately called back to attend to his business, and, being still annoyed by the cough, etc., he again applied for advice, and was seen Jan. 22d, by Dr. Knight, who found an effusion in the lower part of the right chest. Exploring this with an aspirator, he drew off a small quantity of fetid pus. A free incision was advised, and I was asked to make it antiseptically. *January 28th.*—We made an opening in the ninth intercostal space at the back, below and just outside of the angle of the scapula, letting out eight fluidounces of fetid pus. The tubes were inserted, the chest was syringed out with a one-to-eighty solution of carbolic acid, and the antiseptic dressings were applied. For a few days, the dressing was changed once in twenty-four hours; after that, every second or third day. After the fourth or fifth dressing the discharge was serous. The temperature rose to 100° F. immediately after the operation, but on the third day was normal, and continued so till recovery.

On the ninth day the patient went into town (three miles) upon business, and on the tenth day, without advice, he spent twelve hours in the city. No ill consequences followed this imprudence, and from this time he attended to his business, going to town for five or six hours nearly every day. This constant exertion and movement no doubt retarded the full recovery, as the discharge, after having been reduced to about a fluidrachm in the twenty-four hours, ceased to diminish for ten days or more. In spite of this delay, however, the tube was removed February 27th, four weeks from the time of operation; and in five days the opening was closed.

March 3d.—Dr. Knight examined his chest again, and found good resonance to the base in the axillary line, and to the opening behind. Below the point of the opening in the back it was dull. Respiration was good down to the opening in the back, and below that level in the axillary line. The patient now went to North Carolina for two or three weeks, and rapidly gained flesh and strength. He continues perfectly well.

For the history of the next case I am indebted to Dr. Swift, with whom I saw it.

CASE III.—The patient was a boy sixteen months old. About Christmas he contracted a cough, and began to lose flesh and strength. A month later the parents noticed that he breathed quickly and could lie only on his right side. This condition of things continuing, Dr. Swift was called, February 15th. He found the left side of the chest filled by a large effusion, distending it so that it measured 2·5 ctm. more than the other. The heart's apex-beat was below the right nipple. The temperature was 101° F., the pulse 140 to 150, and the respiration 52. He explored the chest with a subcutaneous syringe, and withdrew a few drops of pus.

The parents consenting, Dr. Swift operated, on February 18th. An opening was made in the eighth intercostal space, in the axillary line, and the tubes were inserted. Twenty-eight ounces of laudable pus were evacuated. The following day the temperature had fallen to 99·5°, the pulse to 120, and the respiration to 32. The dressings were changed each day for about a week; after that, once in two or three days. On one or two occasions, when clots appeared, the chest was syringed out with a one-to-eighty solution of carbolic acid. The temperature once reached 100°, but was usually from 99 to 99·5. The discharge had ceased on the thirteenth day; the tube was therefore removed, and the opening rapidly healed. Two months later an examination of the chest showed the percussion and respiration normal throughout. The left side, which, when it contained the effusion, measured 2 ctm. more than the right, was now found to be 1 ctm. smaller.

The next case occurred in the practice of Dr. Sullivan, of Malden, to whom I am indebted for the following notes:

Case IV.—J. E., a man of thirty-three, was always well till the autumn of 1879, when, in November, he began to feel good for nothing, and noticed that he could not lie on either side with comfort. Early in December he began to have a dry, irritating cough, with some difficulty of breathing. Dr. Sullivan saw the patient for the first time on December 15th, and found a considerable effusion in the left pleural cavity, which steadily increased until it filled the whole side and displaced the heart so that the apex-beat appeared just below the right nipple. Soon after the effusion reached its height it began to subside; and in February the chest was free, except at the base, where a slight dullness persisted. The heart had resumed its normal position.

He now suffered a slight exposure, and the fluid reaccumulated. This attack was accompanied by little or no cough, and but slight dyspnœa. His temperature at first rose to 105°, but soon fell nearly to normal again. This effusion not subsiding as readily as the previous one, Dr. Knight saw the patient in consultation; and it was decided to tap the chest, and, if the fluid were purulent, to establish a free opening under antiseptic precautions. Dr. Sullivan accordingly aspirated upon two occasions, and obtained once seven and a half fluidounces, and the other time eleven and a half fluidounces of coagulable serum. At the second aspiration, the withdrawal of the fluid caused a dragging sensation in the chest, and was stopped immediately upon the appearance of this symptom.

Early in May, without apparent cause, the patient had a chill, and the temperature rose to 103°, but soon subsided and remained normal in the morning, with an evening exacerbation to about 101°. *May 19th.*—Dr. Sullivan again aspirated, and this time obtained five or six fluidounces of laudable pus.

May 21st.—I saw the patient with Dr. Sullivan, and operated, as had been decided in the consultation with Dr. Knight. I made the opening in the sixth intercostal space, in the anterior part of the sub-axillary region. This place was chosen because through this point Dr. Sullivan had drawn pus; while, in his other aspirations, in the back, he had made several unsuccessful attempts, owing, apparently, to adhesions binding the lung to portions of the chest wall. These adhesions were also made evident by the dragging sensation which the patient experienced at the second aspiration when a comparatively small quantity of fluid had been drawn. About eight or ten fluidounces of laudable pus escaped when the opening was made; the tubes were inserted without difficulty, and the dressings were applied.

For four days the temperature remained at about 98° in the morning and 100·4° in the evening. The evening temperature then subsided to 99·6°. Since the twelfth day he has spent much of his time in a bed in a tent. He feels decidedly better for this, and his appetite, always pretty good, has still further improved. In going and coming between the tent and his room, he goes over the stairs easily without assistance, which he could not do before the operation. Since going out of doors his temperature has risen about one degree. No cause can be assigned for this, as the dressing remains perfectly antiseptic.

The discharge of pus, instead of disappearing rapidly in this case, as it did in the others, continues up to the present time (the seventeenth day) to be between one and two ounces in the twenty-four hours. This is evidently due to the fact that the lung, being tied down by adhesions, and disabled by its long compression, is not able to expand and obliterate the cavity as rapidly as usual. That it is, however, slowly dilating, is shown by the constantly increasing area over which vesicular respiration is to be heard. Considering the long duration of this case and the obstacles to success, the gain in strength and flesh, with the gradual dilatation of the lung, is certainly gratifying.

In looking over the literature of the subject, I find surprisingly few cases reported in which this plan of treatment was followed. In the German journals I have found ten such cases, which I will read to show the duration of treatment, from the operation to recovery:

Reported by	Sex.	Age.	Duration of Disease before Operation.	Tube removed.	REMARKS.
1. Wagner.	Male	27	2 months.	In 40 days.	
2. Wagner.	Male	36	2 weeks.	In 31 days.	
3. Wagner.	Male	44	2 weeks.	In 50 days.	Two cavities, requiring two separate openings.
4. Wagner.	......	5	6 weeks.	In 9 days.	
5. Göschel.	Male	1	....	In 8 weeks.	
6. Göschel.	Female	3½	4 weeks.	In 30 days.	
7. Göschel.	Male	3¼	4½ months.	In 8½ months.	Child running about with dressing, the tube constantly slipped out.
8. Göschel.	Male	4	1 month.	In 4 weeks.	
9. Krabbel.	Male	10	1½ months.	In 1 month.	
10. Krabbel.	Male	25	....	In 2½ months.	This patient had phthisis when empyema developed.

In these cases reported by German observers, absence of fever and quick and complete recovery are noticeable features. In one of them a child five years old recovered in nine days. This child was treated as an out-patient, and was brought each day to the hospital to have the dressing attended to. Case 10 is interesting for the fact that the man was suffering from phthisis in both apices at the time that the empyema appeared, in spite of which, however, the cavity was closed at the end of two and a half months. These cases present, I think, a fair array of the difficulties which one is likely to meet with in this operation. The results recorded must be looked upon as very creditable. As the details of the dressings are better understood, the duration of the treatment may no doubt be still further shortened.

The main advantage which this method offers over the treatment by aspiration is the entire removal of the pus from the chest. No matter how thoroughly the aspirator is used, a certain amount of pus and purulent fibrine must be left; this usually makes itself known at once, by its irritant action causing a rapid reaccumulation of the fluid, which must be drawn off again and again, till, finally, when the more radical operation is decided upon, the patient is worn out, and the lung is so fastened by adhesions and disabled by compression that it expands but partially and slowly, thus greatly prolonging the closure of the cavity. In those few cases where, after drawing off the pus one or more times, a reaccumulation does not occur, the residue is partially absorbed, and remains as a cheesy mass, to act as the focus for a future general tuberculosis, or by its direct irritation and pressure to originate local inflammatory processes in the lungs.

It is claimed, however, that aspiration exposes the patient to less immediate danger than the free incision. As a fact, the fever after a successful antiseptic operation is less than ordinarily after aspiration, and the patient in a few days so gains strength as to be about in the open air.

The only real danger is that the dressing will cease to be antiseptic, and this is to be avoided by proper care on the part of the surgeon. We must remember that the cases of cure by aspiration which are reported, and which encourage us to continue temporizing with this less radical method of treatment, are the few successful cases among a very large number of unsuccessful ones of which we hear nothing; and even they are incomplete, in that we can not ascertain their subsequent history, and learn whether the cheesy residue left in the chest has ever given rise to further trouble. Most of these successful aspirations, too, occur in children, who, as a rule, do well with any operation and recover with remarkable rapidity after the antiseptic incision. The aspirator will ever remain an excellent means of diagnosis and of palliation in cases unfit for operation, as in advanced phthisis; but the considerations I have offered make it seem to me doubtful whether aspiration is wisely relied on as a curative measure in empyema.

My reasons for dissenting from the conclusions which Dr. Stimson draws from his experiments upon the efficacy of the antiseptic spray are briefly as follows:

His test was this: After boiling several test tubes of urine to destroy any germs already in them, he then exposed them open to the air with the antiseptic spray from an atomizer playing over them. This exposure was continued for one hour, during part of which time a distant portion of the room was swept to raise a dust. He then moved some of his tubes about so as to catch visible particles of dust falling through the spray; others he tipped on the side to insure such atoms as caught upon the sides of the tubes reaching the urine. These tubes he then stopped with plugs of cotton-wool, and set aside to watch. Those tubes in which he was sure that particles of dust had been received putrefied rapidly, the others more slowly. As a controlling experiment, he prepared other tubes in exactly the same way and stopped them similarly with cotton-wool without having exposed them to the air. These remained clear and sweet. He therefore concludes, very rightly, that the dust falling through the spray was not purified in its passage, and from this he jumps to the conclusion that the spray does no good.

In 1877, in the course of some experiments upon antiseptics, a portion of the results of which I reported in the "Boston Medical and Surgical Journal" for November 27, 1879, I tested the spray in a manner somewhat similar to that employed by Dr. Stimson. While exposing a set of wine-glasses containing an aseptic meat-solution in the spray of an atomizer throwing a five-per-cent. solution of carbolic acid, I held another atomizer, throwing a very feeble septic solution, so that a portion of its spray should mix in the antiseptic spray over my wine-glasses. After a few minutes of this exposure, I covered the glasses and set them aside. Within a few hours they were full of bacteria. From these experiments I concluded, like Dr. Stimson, that the spray did not immediately destroy germs which it found in the air; but it seemed to me that its usefulness was still assured by its action as an antiseptic shower and by its power of displacing dusty, impure air.

It may be objected that Dr. Stimson's experiments show that the spray does not displace the dusty air, for he found that dust did fall through it. His test, however, does not fairly demonstrate this point, for by sweeping the room he put in circulation large, heavy particles, which settle rapidly, and are less affected by currents of air than the light dust which is found in the ordinary air of the house. Moreover, he placed his atomizer at such a distance (three feet and a half) that the blast was exhausted before it reached the tubes.

When, in opening a chest, it is important to displace the dusty air entirely, the atomizer should be placed within at least two feet of the opening, unless the blast is exceptionally strong. If the spray is at a more considerable distance, its main action is the supplying an antiseptic shower over the parts exposed. In Dr. Stimson's experiments this function of the spray was powerless, as a particle of dust, once in the urine, was beyond its reach.

A REPORT OF SIX CASES OF PLEURITIC EFFUSION TREATED BY ASPIRATION.

By W. H. KATZENBACH, M. D.,

ATTENDING PHYSICIAN FOR DISEASES OF THE CHEST TO THE OUT-DOOR DEPARTMENT OF BELLEVUE HOSPITAL.

Case I.—Mrs. A. W., aged twenty-six, was first seen October 20, 1878. For the previous three or four months she had been confined to bed, off and on, with severe abdominal pain, and vomiting soon after the ingestion of food. She had also what she called a "catching" pain in the right hypochondrium when she took a deep inspiration. There was *no cough or dyspnœa.* Pulse 120; respiration 30; temperature 101·25° F. in the axilla. Signs of fluid in the right pleural cavity were obtained; the level of the liquid extending up to the fourth rib in front, and to the middle of the scapular region behind. The heart was not displaced. She was put upon the use of tonics and suitable diet. *October 23d.*—P. 98; R. 30; T. 101·5°. *24th.*—P. 108; R. 28; T. 101·75°. Thoracentesis was performed with Dieulafoy's aspirator, and forty-five ounces of serum were withdrawn. After the operation the pulse was 92, and the respiration 26. *25th.*—Patient's condition is very much improved; eats better; has some cough when she sits up. P. 96; R. 25; T. 100°. *27th.*—P. 87; R. 24; T. 99·75°. Some cough and "stitch" pain in right side, but not annoying. *29th.*—P. 90; R. 23; T. 99·5°. Very much improved. Feeble, but distinct, respiratory murmur over whole of right side, and expansion of this side. To favor further expansion, the left side is strapped with adhesive plaster. *31st.*—P. 96; R. 22; T. 99·7°. *November 3d.*—P. 96; R. 23; T. 99°. Out of bed yesterday and to-day. On examination, the lower portion of the right chest is slightly dull, and the respiratory murmur over it is feeble, but clear. *9th.*—P. 84; R. 22; T. 99·7°. Has been out of bed every day since last note, and even out in the air, walking.

This patient made a rapid and complete recovery, without retraction of the chest. I have seen her within the past six weeks, and she is in the enjoyment of good health.

CASE II.—P. O'H., aged twenty-six, a laborer, consulted me at the Out-Door Department of Bellevue Hospital, March 31, 1875, and gave the following history: About eight months ago he was seized with a chill, which lasted nearly the whole day, and was followed by fever, pain in the right side, cough, and shortness of breath. He was confined to bed some time, and made slow improvement. After being about again for five weeks, his shortness of breath increased, and he rapidly lost strength. A physician whom he consulted informed him that his right lung was consolidated, and ordered him to apply a blister, nine inches square, to the front of his right chest; another in a week, behind; and, subsequently, a third, in front. These produced strangury, and weakened him still more. His breathing, however, improved for a time. As cold weather came on he grew rapidly weaker, lost his appetite, and, becoming discouraged, came to New York to die among his relatives.

Physical Examination.—Bulging of *right* side; intercostal depressions obliterated; very slight movements of this side, which measures one inch and a quarter more than the left. Absence of vocal fremitus; flatness over the whole right side, and extending in front beyond the left border of the sternum. Respiratory murmur absent over right lung. *Heart.*—The apex beat in the sixth space, one inch beyond the nipple line; a mitral systolic murmur was transmitted a short distance to the left; first sound good, second sound not heard. *April 1st.*—Visited him at his home. P. 116; R. 26; T. 99° in the axilla. With Potain's aspirator I removed 133 ounces of thick, greenish-yellow serum. More could not be removed on account of urgent coughing spells. A hypodermic injection of morphine, however, relieved these. Thoracentesis was performed at 10.30 A. M. At 1.25 P. M. he was seen again, when he was feeling very comfortable and *hungry*. P. 98; R. 20; T. not taken. At 4 P. M., P. 74; R. 24; T. 99·4°. Cough had ceased; breathing easy. Apex-beat inside of nipple line. He was ordered tonics and stimulants. *2d.*—P. 90; R. 24; T. 98·5°. Slept well last night, and feels in good condition. Right side expands. Respiratory murmur is heard behind to a point below the angle of the scapula. *3d.*—P. 98; R. 26; T. 100·5°. Is eating well; was out walking yesterday, and was not fatigued. *6th.*—P. 98; R. 30; T. 100·5°. *May 8th.*—10 A. M., P. 97; R. 36; T. 98·5°. Fluid has reaccummulated. With Flint's trochar, attached to a Davidson's syringe, I syphoned off 118 ounces of serum. Pain and cough then obliged me to discontinue the operation. At 1 P. M., P. 80; R. 21; T. 98·7°. *9th.*—P. 74; R. 18; T. 99°. *12th.*—P. 86; R. 21; T. 99·7°. Improved. *19th.*—P. 66; T. 98·7°. *June 25th.*—P. 92; R. 24; T. 100°. Has been working as a coachman since last note, but is losing strength.

December 13th.—Has been working since last note. In the interval has been to the Out-Door Department, complaining of cough and shortness of breath. Has not lost flesh. To-day he presents himself, feeling very weak, with a temperature of 102°, and signs of fluid in the right pleural cavity, extending above the angle of the scapula. He was recommended to enter the hospital, and did so December 15th. On February 12th, 116 ounces of serum were removed from his right pleural cavity. *March 1st.*—Has been improving rapidly; says he feels well, and is about to visit Ireland. *April 12, 1878.*—An acquaintance of this patient was seen to-day, and from him it was learned that O'H. was living, and had not complained of chest symptoms for a long time.

Case III.—Mrs. M. H., aged forty-one, was seen at the Northwestern Dispensary, November 29, 1874. Her previous history was good, but she had not felt strong for two or three months before, and had experienced occasional sharp pains in the *right* side. About eleven or twelve days ago she began to have cough, expectoration of serous sputa, shortness of breath, and a sense of suffocation. She had had no chill, no fever, and no pain. Her appetite was poor, and she was growing weak, and slept but little. P. 110; R. 36; T. 99·5° in the axilla.

Physical Examination.—Diminished movements of *right* side, flatness extending up to the fourth rib in front, and to the mid-scapular region behind. This side measured an inch and a half more than the left. The heart's apex was displaced to the left. At noon I visited her at her home, placed her on a chair, with her forehead resting on a pillow on the back of the chair, and removed by aspiration 48 ounces of greenish-yellow serum. The operation was discontinued when she complained of tickling in her throat and "dragging" in the right chest. Her pulse fell at once to 90, and increased in volume. She was ordered tonics and stimulants. *December 1st.*—The patient walked to the Dispensary to-day, and said that her breathing was better, but that she had a troublesome cough. A sedative cough-mixture was ordered, and flying blisters for the affected side. *10th.*—Much improved. Measurements of the two sides equal. Respiratory murmur feeble, but heard below angle of scapula. Strapped the left side, to increase the expansion of the right. *January, 1875.*—Very much improved. Complains only of dyspeptic symptoms.—This patient died in Bellevue Hospital March 5, 1875, of inanition, due to non-malignant stricture of the pyloric extremity of the stomach. The *post-mortem* record omits mention of the condition of the lungs and pleuræ.

Case IV.—Mr. S. C. B., aged forty, a dentist. On the night of February 21, 1879, after coming out from a place of amusement, and standing in the cold, waiting for a stage, he was attacked with chilly feelings, which lasted, off and on, through the night and into the afternoon of the next day, when dull pain in the *left* side, under the nipple, was experienced. He complained also of headache, loss of appetite, and weakness. There was no cough or dyspnœa. On auscultation, a faint pleural friction-murmur was heard over the site of pain. For several days there was fever ranging from 100° to 102°. On March 3d the friction-sound was still heard. The patient went out on the 4th, and in the evening took a warm bath gradually cooled by adding cold water. He was out again on the 5th, and returned to his house, feeling quite weak. He took a bath in the evening, and a cathartic on getting into bed. *March 6th.*—

11 A. M., P. 96; T. 99·2° in the axilla. 4. 30 P. M.—Feels very weak. Has dull pain to the right of the sternum. P. 100; R. 19; T. 102·2°. Signs at site of pain, negative. *Left* side.—Dullness over nearly the whole in front; broncho-vesicular respiration above; bronchial below. 9 P. M.—P. 100; R. 20; T. 101·6°. Patient perspiring. *7th.*—9 A. M., P. 98; R. 20; T. 99·1°. Bronchial breathing over nearly the whole left side. 4 P. M.—P. 102; R. 22; T. 102·2°. No pain, no dyspnœa. Occasional cough, no expectoration. Appetite fair. 9.30 P. M.—P. 96; R. 20; T. 101·8°. *8th.*—8.45 A. M., P. 85; R. 18; T. 98·6°; 4 P. M.—P. 102; R. 28; T. 102·2°. 9.20 P. M.—P. 96; R. 22; T. 102·2°. *9th.*—9.30 A. M., P. 89; R. 20; T. 99·8°. Bronchial breathing, distant, behind, below angle of scapula; concentrated, near the ear, in front, under the nipple. Left side measures one third of an inch more than the right. Apex-beat of heart in fifth space, near the sternum. An hypodermic needle was introduced through the eighth intercostal space, and a syringeful of straw-colored serum was removed. 9.15 P. M.—P. 102; R. 19; T. 102·2°. Urine examined—acid, sp. gr. 1·024; no albumen. *10th.*—8.45 A. M., P. 100; R. 20; T. 99·6°. Appetite better, no dyspnœa, no cough. First sound of heart heard most distinctly over ensiform cartilage. From this date the patient gradually grew weaker; had daily exacerbations of fever in the evening and free perspirations at night. He was put on the use of acetate of potassium with infusion of digitalis, but no increase was observed in the amount of urine voided—on one day the quantity was but about two pints. The physical signs remained unchanged. It was concluded that the pyrexia was kept up by the irritation of the fluid in the pleural cavity, and that thoracentesis should be resorted to before the patient grew weaker. *14th.*—9 P. M., P. 90; R. 18; T. 101·2°. *15th.*—P. 88; R. 18; T. 98·4°. Profuse sweating in the night. With Flint's trochar and cannula and a Davidson's syringe I syphoned off 50 ounces of greenish-yellow serum at 11.15 A. M. After the operation the patient felt weak, and brandy was given by the mouth, with one fifth grain of morphine. 2.30 P. M.—P. 77; R. 14; T. 99·2°. Has been sweating.—Physical examination shows good resonance on the affected side in front, diminished respiratory murmur, and friction-sounds.—Heart's apex in the fifth space, between the sternum and the nipple. 8 P. M.—P. 68; R. 18; T. 99·2°—the lowest evening temperature since the beginning of the effusion, or, rather, since its discovery; and it never rose again to this point. The patient made a good recovery, but with a retracted left chest and lateral spinal curvature. He was examined recently, and the physical signs were good.

CASE V.—J. McC., aged thirty-one, car-driver. *March 19, 1879.*—Patient's family and personal history good. Habits have always been temperate. He was well up to February, 1878. He was then attacked with cough, and expectoration of "thick phlegm." This continued, progressively increasing, through the summer and fall. He lost flesh, and grew weak, and was obliged to give up work. Suddenly, one night in October, 1878, he was seized with sharp, dagger-like pain in the epigastrium, shooting toward the right nipple. He was unable to take a long breath. He had high fever for ten days, during which time he did not sleep day or night. Since then he has had cough, expectoration of "white phlegm," great shortness of breath, increased by even a small amount of food in the stomach, and weakness. He can not walk half a block without stopping to rest. He has lost thirty pounds in weight. Has no night-sweats.

Physical Examination.—Absolute flatness over the whole *right* side, and extending beyond the left border of the sternum. Complete absence of all signs on auscultation. This side measures an inch and a half more than the left. Apex-beat of heart in seventh intercostal space, in the axillary line; systolic murmur at apex; "galloping" pericardial friction-sound on left of sternum, near third rib. With an hypodermic needle I removed a milky fluid. *March 29th.*—3 P. M., gave the patient brandy, with one fifth grain of morphine; and, with Flint's trochar and cannula and a Davidson's syringe, syphoned off 138 ounces of sero-pus, without the slightest annoyance to the patient, but to his very great relief. At 4 P. M. his pulse was 102, respiration 26, temperature 98·2° in the axilla. *30th.*—10.30 A. M., P. 89; R. 20; T. 98·7°. Slept well last night, and has eaten a good breakfast this morning. The only change in the physical signs is the presence of obscured bronchial breathing on the right side in front. Flatness remains absolute. The heart is in the sixth space, just outside the nipple-line, and the apex retracts with the systole. *April 10th.*—Walked about ten miles yesterday without fatigue. P. 104; R. 19; T. 98·5° in the right axilla. *24th.*—P. 115; R. 18; T. 97·6° in the axilla. Has increased in weight since the 12th, about five pounds. Pericardial murmur has disappeared. He continued to improve for a few months. *December 13th.*—Has been driving a car since May 1st, up to about a month ago, when, on account of returning shortness of breath, he found himself obliged to take the position of conductor. He worked yesterday from 8 to 8 P. M., though his breathing was so short that even the slight exertion of putting on his coat would necessitate his sitting down to rest afterward. The right side measures three quarters of an inch more than the left. Apex-beat of heart in sixth space, on a line with the axilla. At 3.30, with the same instruments as before, I withdrew 152½ ounces of sero-pus, which, on heating, nearly solidified. A half ounce of it, after being heated in a test-tube, yielded fifteen minims of fluid. The removal of this amount was unaccompanied with pain or disturbance of any kind to the patient; on the contrary, during the withdrawal he was profuse in his expressions of increasing comfort. After the operation, P. 86; R. 22; T. not taken. *14th.*—P. 81; T. 98·5° in the mouth. No change of signs on right side, on account of immense pleural thickening, the percussion being still absolutely flat. Apex-beat of heart one inch to left of nipple-line, and three quarters of an inch below the nipple. *16th.*—Walked a long distance to-day. Says he feels well.

June 8, 1880.—Patient has been well since last note. *Physical Exami-*

nation.—Measurements of the two sides equal. Complete flatness over whole right side remains. A feeble respiratory murmur is heard behind, nearly to the angle of the scapula; and in front to the fourth or fifth rib. Heart-apex is in the fifth space, half an inch to left of nipple-line. He is working as conductor on a horse railroad, and says he feels as well as he ever did.

Case VI.—A. P., aged thirty-eight, cigar-maker. This patient was under my care one year ago, with a cough which had existed for two or three years. *August 28, 1879.*—Four months ago he was attacked with pain in the *right* side. Six or seven weeks ago he observed a bulging of this side. He has cough and dyspnœa. His appetite is good, but he is losing flesh. The cough is troublesome, but the expectoration is scanty. Sleeps on the right side. P. 112; R. 30; T. 99.5° in the axilla. *Physical Examination.*—Bulging of lower portion of right chest, diminished respiratory movement, flatness up to angle of scapula behind and dullness above. Feeble respiratory murmur, diminished vocal fremitus and resonance. Apex of heart in fifth space, on the nipple-line. With an hypodermic needle I removed straw-colored serum. He was put upon the use of tonics and a sedative cough-mixture. *September 11th.*—Signs unchanged. Gave him some whisky, with a solution of atropine and morphine. With Flint's trochar and cannula and a Davidson's syringe I removed 16 ounces of greenish-yellow serum. As the patient complained of "a drawing" in his chest, no more fluid was withdrawn. There was no coughing. After removal, P. 116; R. 36; T. 100·3°. He was ordered to keep quiet in bed until the next morning. (The aspiration was performed while he sat leaning over a chair back.)

October 20th.—He improved for a short time, but is now rapidly growing weak. His breath is very short, and he has lost appetite. On examination, the signs of emphysema are marked, but there are no signs of reaccumulation of the effusion. *25th.*—He seemed better last night, but died at four o'clock this morning.

Autopsy, at 3 P. M.—Right lung firmly adherent to the diaphragm, and to the chest-wall, posteriorly and inferiorly, by thick fibrous tissue. Left lung slightly adherent at the apex. Several ounces of serum in the right pleural cavity. Both lungs emphysematous and filled with *miliary tubercles.* Cheesy processes at the apex of the left lung. Miliary tubercles on the pleuræ. The pericardial sac contained five or six ounces of serum. Right ventricle of heart dilated; left hypertrophied; valves not thoroughly examined. No tubercles in the liver. Other organs not examined.

Remarks.—In regard to the instruments: After having employed nearly every variety, I have settled upon the Flint's cannula, which is provided with a stop-cock, attached to a Davidson's syringe. After incising the skin, the cannula is quickly inserted with the trochar; the trochar is withdrawn, and the stop-cock turned. The syringe is easily attached. The bulb of the syringe is compressed, the tube lowered, and the stop-cock turned, and the fluid runs out in a continuous stream, as from a syphon. The rapidity of the flow is regulated by the stop-cock. I am accustomed to use a sixteen-ounce graduated measure to collect the fluid. As soon as it is filled, the stop-cock is turned off, and while the measure is being emptied the patient can rest. By withdrawing the fluid slowly, a larger quantity can be removed and with less discomfort to the patient. There is no danger of the cannula wounding the lung.

In Case V. 138 ounces of fluid were withdrawn at the first operation, and 152½ at the second. I have been unable to learn, by inquiry and search of literature, of a larger quantity than either of these having been removed at one time. The patient is six feet in height, with a large chest. As he now has a fibroid pleura of considerable thickness, the only reliable sign of reaccumulation will be the displacement of the heart toward the axillary line. The termination of the case will be watched with much interest.

A SUCCESSFUL CASE OF TRANSFUSION OF BLOOD.

By JOSEPH W. HOWE, M. D.,
PROFESSOR OF CLINICAL SURGERY IN BELLEVUE HOSPITAL MEDICAL COLLEGE.

THE following case exhibits in a marked degree the beneficial effects of transfusion of blood when performed in cases of impending death from excessive hæmorrhage.

Mrs. B., aged twenty-two years, was delivered of a three months' fœtus November 7, 1879. From that date until November 11th she had repeated and profuse hæmorrhages from the uterus. On the 10th the bleeding was continuous. Drs. Reynolds and Comstock, who were first called in, succeeded in controlling the hæmorrhage, but not before the patient had reached the stage of collapse. They remained with her all night, endeavoring, with the ordinary means of stimulation, to rouse her, but without avail. She continued to sink in spite of everything.

On the morning of the 11th I was sent for. The patient was then completely pulseless and partially unconscious. The extremities were cold and clammy, and it was evident that, unless some fresh blood were introduced, death would soon supervene. She was so far gone that I made up my mind not to spend any time in defibrinating the blood. I opened the median basilic vein in the right arm of the patient, and introduced the closed cannula of Colin's instrument, and, after passing some warm water through the cylinder of the instrument, attached it to the cannula in the patient's arm. The median cephalic vein in the right arm of the donor was then opened, and the blood was allowed to flow directly into the cylinder without defibrination. When a sufficient quantity had been obtained, and while the blood was still flowing, I injected, without any difficulty, between seven and eight ounces. The whole operation did not occupy more than five minutes in its performance.

Within half an hour the pulse returned at the wrist, the voice became clear and distinct, and she asked for something to eat, saying that she felt stronger, and better in every way. One of the medical gentlemen who had been with her all night, assisting in the attempts at resuscitation, and who had left in the morning, believing that there was no hope of her recovery, came in, an hour after the operation, and said it was "a perfect transformation-scene"—that he had no idea that a few ounces of blood could restore lost vitality so rapidly.

From that time on the patient continued to improve, and when I last heard from her she was in the enjoyment of good health, and attending to her household duties without any discomfort whatever.

◆

Lectures.

RENAL CALCULI: THEIR CAUSATION, CHARACTER, SYMPTOMS, TREATMENT, AND PREVENTION.

A LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

By ROBERT F. WEIR, M. D.,
LECTURER ON DISEASES OF THE GENITO-URINARY ORGANS.

Gentlemen: You will remember that at our last lecture, when speaking of disease of the prostate, I told you that, on account of the increased production of ammonia incident to that disease, we should always bear in mind the possibility of there being a stone in the bladder—a stone composed of the triple phosphates. But the deposit of the phosphates from the urine is not enough of itself to produce calculi; another element enters into their composition. In consequence of the irritation set up by the prostatic affection, marked congestion of the bladder ensues, and as a result of this the normal quantity of mucus is greatly increased. Thus, then, we have mucus plus earthy salts—all that is necessary to constitute a stone. A stone of this character may be called an inflammatory calculus, because its existence is almost always due to the presence of inflammation.

But we have calculi of other kinds; and it is of these that I propose to speak to you more particularly to-day. They are of non-inflammatory origin, and are usually found primarily in the kidney; their production being mainly due to the fact that the urine is too heavily laden with salts. A temporary excess of salts in the urine is, as you are all aware, by no means an uncommon occurrence. You know that in consequence of an ordinary cold there is frequently a marked deposit of urates; and in the summer season, when we eat a great deal of fruit, the phosphates appear in excess in the urine, so that, on boiling the urine, such a thick, white cloud is precipitated that it would seem to be loaded with albumen. The addition of a little nitric acid, however, makes its true character at once manifest.

Calculi are liable to be formed in any portion of the urinary tract; but they have their origin much more frequently in the kidney than in any other part. The kidney, we believe, acts the part of a filter in the economy, and there are certain substances which, if existing in excess in the urine, are more or less likely to produce calculi. The following table, embracing some of these, is taken, with some omissions, from Murchison's work on "Diseases of the Liver," and will enable you to comprehend better what these are, and whence they are derived by retrograde metamorphoses:

Albumen, $C_{72}\ H_{112}\ N_{18}\ SO_{22}$,
Tyrosin, $C_9\ H_{11}\ NO_3$,
Leucin, $C_6\ H_{13}\ NO_2$,
Xanthin, $C_5\ H_4\ N_4\ O_2$,
Uric acid, $C_5\ H_4\ N_4\ O_3$,
Cystin, $C_3\ H_7\ NSO_2$,
Urea, $CH_4\ N_2\ O$,
Oxalic acid, $C_2\ H_2\ O_4$.

Stones composed of xanthin are exceedingly rare, there being in all only four or five cases on record. It is necessary, therefore, only to refer to it in passing. When we come to uric acid, however, it is a matter of much more practical interest; for the great majority of all the stones found in the kidney are composed of this substance. In India Mr. Van Dyke Carter, formerly connected with the British East Indian service, but now of London, found that, in sixty-two calculi, urates formed the nuclei in thirty-four, oxalates in twenty-one, and uric acid in seven; that is, the nuclei were composed of uric acid and urates in fifty-six per cent. of the calculi. The case was different, however, in England. There this percentage rose to the high figure of seventy-one. But, while in India the nuclei were formed of oxalate of lime in thirty-eight per cent. of the cases, this was the fact in only fourteen per cent. of the cases in England. The reason for this difference is not difficult to see. In India the inhabitants live principally on rice and other farinaceous food; and thus it is that there is such a preponderance of oxalate-of-lime calculi there. It is principally a matter of diet, then. In the summer season, when much fresh rhubarb and similar plants are eaten, the urine is found to abound in oxalate of lime. But the kind of food taken is not the only thing that concerns the production of this substance. Unusual mental activity always results in its presence in the urine.

In the course of his investigations Mr. Carter made one very important discovery, which throws much light upon the causation of urinary calculi. In his microscopic examinations of the nuclei he observed some very peculiar rhomboidal crystals of oxalate of lime and of the urates, and their appearance at first puzzled him very much. Ord and Rainney afterward showed that they belonged to a submorphous form of these salts. The point which I wish you to remember is, that these submorphous crystals are deposited under certain special conditions, viz., the presence of a colloid material, which causes the crystallization to take on this peculiar form. This colloid material may consist of mucus or some other organic substance; but, if Carter's views are correct—and I believe them to have been fully established—this is an essential element in the formation of stone. In fact, the nucleus in nearly all calculi examined by him was formed either of uric acid, of urates, or of oxalate of lime, plus a certain amount of mucous cement, so to speak.

Renal calculi may be situated either in the uriniferous tubules or in the pelvis of the organ; they may be single or multiplé, and they may exist in one kidney and not in the other. The younger the individual, the greater is the probability of stone occurring. This is a universal rule up to the age of fifty-five, when the liability to the stone of inflammation usually commences. Children, as you are no doubt aware, are peculiarly liable to congestion of the kidneys, even from comparatively trivial causes. It is very common indeed for them to pass pink urine, and Rindfleisch has shown that, whenever congestion of these organs occurs, there is an outpouring of hyaline or colloid material into the tubules of the kidney. This is frequently seen in the course of fevers and other acute affections. Here we have the essential conditions of a stone —a colloid with a supersaturated urine.

Fortunately for the children, and, indeed, for all of us, when the nucleus of a stone begins to form, the process is frequently interfered with and stopped before it has gone on very far. Thus, if one of these "young stones" is subjected to a stream of healthy urine, it will usually break down completely, and the particles composing it will pass safely out of the system. If the nucleus has become fully formed, however, it is apt to increase in size by the deposition of successive laminæ; so that the same stratification may sometimes be seen in a urinary calculus as is met with in the rocks. You can generally form a pretty correct idea of the composition of a stone from its appearance, and I will now show you a number of specimens showing the different varieties ordinarily met with. This fine one which I hold in my hand, and which you observe has been laid open, I should judge to consist of oxalate of lime at the center, urates around this nucleus, and a thick external layer of phosphates; the latter being no doubt due to the inflammatory action set up by the presence of the stone in the bladder. Mr. Carter has shown that, as a rule, where the patient is under twenty years of age we may expect to find calculi composed of urates, and at a later period of life, those of oxalate of lime; while after the age of forty the uric-acid variety is the most frequent.

Of the cystin calculus, which is very rare, I have one specimen. There are only thirty or forty others in existence, so far as known; and of the whole number this is the only one, I believe, that was found in the kidney. It was taken from the body of an old man who died with prostatic trouble, and it weighs 175 grains. Cystin is the only one of the substances giving rise to stone into whose composition sulphur enters, and this fact is regarded as having some effect upon the character of the calculus formed of it.

A stone once formed, it is liable to set up inflammatory action, and receive deposits of phosphates. It may remain in the kidney for years, as in this one, which weighs 51 oz., or it may pass with comparative rapidity down into the bladder. The largest vesical calculus ever known weighed six pounds. The one which I now show you is a very large one, weighing 13 oz., that was supposed to be a cancer before its removal. When a stone is of such great size, it is not always easy to detect, because the bladder fits so tightly around it that the sound can not be employed with the same advantage as in ordinary cases. The largest stone ever removed, the patient surviving, weighed 15 oz.; here, however, is one successfully removed about a year ago, which weighs nearly 13 oz. These photographs, one of the exterior of the calculus, and the other of a section of it, are taken from this stone, which is the largest ever removed in this country; the operation having been performed by Dr. Gardiner, of Providence, Rhode Island.

But, as I have said, the stone may remain in the kidney indefinitely. In renal calculus the patient will occasionally complain of pain, though in many instances this is not very severe. The urine is for the most part natural in appearance, but is usually found to contain a little blood from time to time. Dr. Reese, of London, has devised a delicate test for this—boiling the urine with tincture of nutgalls.

So long as the stone remains in the kidney, the diagnosis is ordinarily somewhat obscure; but the moment it makes its way into the ureter a series of symptoms ensue which are very severe, and which can not be mistaken. The urine is passed more frequently and is often bloody, and the patient suffers the most intense and agonizing pain. A sign of some diagnostic importance is the retraction of the testicle on the side of the affected kidney, and there is not unfrequently more or less nausea and vomiting. This state of affairs may last for a few hours, or it may remain for a couple of days. For the relief of nephritic colic, opium and anæsthetics are our main dependence, although the warm bath is also of considerable service sometimes. The first thing to do on being called to such a case is to administer an hypodermic injection of morphia, and in my own practice I always combine with it a hundredth of a grain of atropia, and sometimes more. Should this measure fail to afford relief, as is ofttimes the case, we are obliged to resort to the use of an anæsthetic. We should be very careful to inspect the patient's urine, or have it inspected by others, for several days after the attack; because we want to know whether the stone still remains in the ureter, or whether it has passed into the bladder and been voided with the urine. Suppose that after a longer or shorter period (the stone still clogging up the ureter) the man should have a similar attack upon the opposite side. There would then be suppression of urine, either complete or incomplete. Mr. William Roberts, of England, has given a number of cases of this kind. There is a marked diminution in the quantity of urea excreted, and the specific gravity of the urine goes down to 1·002, 1·003, 1·004, or 1·005. In all probability the patient will die within seven or eight days, unless surgical relief can be afforded. Can this be done? I believe that it can, and I have proposed to myself a plan to resort to, should such a case present itself.

As I have before remarked, the symptoms of stone in the kidney are usually obscure; and, although aspiration of the kidney sometimes clears up the diagnosis, yet occasionally nephrotomy is performed, only to reveal the kidney empty. This happened not long ago to the Scotch surgeon, Annandale. To his surprise, however, it was found possible to explore the ureter for three or four inches below the kidney. This I believe to have been a discovery of great importance, for it now enables us to get at nearly the whole length of the ureter, so that a calculus in almost any part of it could be managed—either, if low down, by being squeezed into the bladder by means of the hand in the rectum; or, if above (and the two common points of arrest of a stone are at or near the bladder, and above, within three inches of the kidney), by making an incision through the loin, and thus establishing a urinary fistula, and indeed, if happily it could be reached, removing the stone—a proceeding that I should not hesitate to resort to, for I doubt not that it would be the means of saving the patient's life.

The remainder of the time at our disposal to-day I propose, while the history of the formation of calculi in the kidney is fresh in your minds, to devote to the important subject of *the prevention of urinary calculi.* In this connection, the first thing we inquire about is, What causes the concentration of the urine which gives rise to this affection? It would be impossible to go into the consideration of this question fully here; but I may mention two things as having a very important bearing upon the matter, viz., sedentary habits and indigestion. As smoking has a greater or less tendency to impair the digestion, I sometimes terrify such of my patients as are too much addicted to this habit by telling them what may result unless they use greater moderation or give up tobacco altogether.

It is a well-known fact that stone is of much more frequent occurrence in the southwestern portion of the United States, where there is a limestone formation, than in other parts of the country; but the lime which is taken into the system in the drinking water does not tend to form calculi itself. The true explanation of the greater frequency of the affection in this region is, that the limestone water impairs the digestion of the inhabitants, and thus the bodily functions are interfered with. We find also that after an epidemic of cholera there very frequently follows an epidemic of stone. This is because, in consequence of the diarrhœa incident to the disease, the system is to a great extent drained of its fluids, and the blood becomes thicker.

To prevent the formation of stone, then, we should regulate the diet, avoiding alcohol and saccharine or fatty food; assist digestion; see that the skin is kept in good condition; and, in short, put the patient's system in the best possible condition. But, perhaps you ask, can we not do anything which shall have a special effect in preventing the formation of stone? I think we can. When we recall that a condition of high specific gravity of the urine is a dangerous one, it is not difficult to see that, in all cases where a tendency to calculus exists, the patient should by all means avoid the concentration of his urine. On going to bed, therefore, it is a good plan for such a patient to drink a glass of water; this has the effect, *first*, of diluting the urine in the kidney, and, *secondly*, by the increased pressure caused by it upon the arterial system, of forcing the urine more rapidly into the bladder. Even if it should give him the inconvenience of getting up toward morning to pass water, this practice should be systematically persevered in.

When the urine is strongly characterized by uric acid, some alkali is demanded, since this heightened acidity of the urine is productive of injury, instead of benefit. Many years ago it was a matter of great interest to discover some agent which, administered by the mouth, should have the effect of dissolving urinary calculi after they had formed, and at one time in England a prize of five thousand pounds was awarded to a Mrs. Joanna Stevens for her recipe for dissolving stone. From time to time the salts of potassa and lime, and soap also, have been much used for this purpose; but most of the means hitherto employed have failed in the desired end. By way of dissolving stone in the bladder, however, certain therapeutical agents have a very decided effect when taken by the mouth, or even injected into the bladder. Citrate of potassium has been found exceedingly useful by Mr. Roberts and others, where the calculus was of uric acid; but it can not always be employed, for the reason that, if there is any inflammatory action present, we have the phosphates deposited and these at once put an end to its efficiency. One great advantage of the citrate of potassium is, that it can be administered for a great length of time without producing any injurious effect upon the system. In giving it, it should always be borne in mind that the dose should be sufficiently large to overcome the natural increased acidity after eating, for, you remember, the urine after the ingestion of food is first acid, and afterward alkaline, in its reaction. As a general rule, from forty to sixty grains of the citrate of potassium, three or four times a day, are required.

You will not infrequently hear patients say that, by a visit to Richfield Springs or to Carlsbad, they got rid of all their troubles. The efficacy of the waters of these springs, which have obtained a great reputation in urinary difficulties, is due to their alkalinity; the sulphates of sodium, of potassium, and of magnesium, entering largely into their composition, and thus rendering the blood and urine alkaline. They act directly upon the liver, and do away with its clogged action; and the liver is the organ that is principally at fault in calculous individuals.

Therefore, in our treatment of these cases, when the patients are not able to go to such springs, we should imitate the way in which Nature works, and administer appropriate purgatives and alkalies. Thus, a teaspoonful of citrate of potassium at night, in a tumbler of water, often serves a very good purpose.

Then there are many natural mineral waters at our disposal, and Sir Henry Thompson has pointed out the fact that the artificial waters, made in imitation of these, for some reason do not seem to have the same beneficial effect upon the system. I will, therefore, mention a few of these natural waters which you will find of service in this class of affections. The Friedrichshall water contains fifty-eight grains of sulphate of sodium and forty-nine grains of sulphate of magnesium to the pint; the Carlsbad water, twenty-five grains of the sulphate of sodium, and the Marienbad, forty-eight grains of the same salt to the pint. But we have a water which acts in a much more energetic manner than any of these, and can, consequently, be given in much smaller doses; and that is the now well-known Hunyadi János water. This has really more than twice the strength of the others, containing one hundred and twenty-nine grains of sulphate of sodium and one hundred and thirty-nine grains of sulphate of magnesium to the pint. It has also the advantage of being less unpleasant to the taste.

The Pullna water, I may mention, is very active too, due principally to its containing ninety-three grains of sulphate of magnesium and one hundred and twenty-four grains of sulphate of sodium to the pint.

The citrate of potassium, I may say in passing, is apt to be more or less inert, as ordinarily found at the drug shops, since it spoils by exposure to the atmosphere. It should, therefore, be used when fresh; and a very good way to administer it is to prepare solùtions of bicarbonate of potassium and citric acid separately, and then pour them together at the time of taking. An effervescent draught is thus furnished, which is not unpleasant to the taste. Did time permit, I might say much more upon this subject; but the rapid survey which we have now taken of it will give you some idea, I trust, of stone in the kidney, and how to obviate it.

If the natural mineral waters can not be obtained, you will find a very good substitute in Glauber's salt, the ordinary sulphate of sodium, which is nearly as effective. From one to two teaspoonfuls of this should be given in water before breakfast, and followed by a cup of hot tea or coffee. There is one point of caution that I will allude to, and that is, give a sufficient quantity to produce the desired effect; for, if the dose is too small, catharsis will not be produced, and the patient will only be annoyed by an uncomfortable rumbling in the bowels on account of the gas evolved.

Editorials.

A POINT IN THE DIAGNOSIS OF STRICTURE OF THE RECTUM.

It is not many years since it was generally accepted that the passage of tape-like fæces was diagnostic of stricture of the rectum. This teaching has gradually given way in the light of clinical observation, and it is now commonly understood that many other conditions besides stricture may cause deformed passages, such, for instance, as tumors and displacements of the uterus, pelvic growths, and, more than all else, the spasmodic action of an irritable sphincter muscle. If the shape of the passages is of any diagnostic value in this affection, it is from the small, rounded, goat-like stools that we have to fear the existence of grave occlusion of the rectal caliber, rather than from any other. But, though this has been generally taught and understood for some years, the idea has always been tenaciously held that, although deformed passages might be caused by other conditions than stricture of the rectum, still a stricture always involved the idea of misshapen stools, and, indeed, that stricture with natural passages was a physical impossibility. This also seems to be delusive in certain cases, and, if we stop to think a moment, there seems to be no reason why, with a stricture well up in the rectum, fæces should not pass through it in small quantities, accumulate and become massed again in the rectal ampulla, and finally escape of a natural size and shape. That this does occur is no longer a question for theorizing.

In an able article on Annular Stricture of the Intestine: its Diagnosis and Treatment, in the "British Medical Journal" for May 31, 1879, Mr. Stephen Mackenzie wrote: "The fact that full-sized, properly formed fæces are occasionally passed of course shows that there can be no organic stricture." Under an active fire of adverse criticism he withdraws the statement in the issue of the same journal for May 15, 1880, with the explanation that it was founded on his personal observation, which has since been supplemented and corrected by that of others. In the same number of the journal in which his first statement appeared another case was published by Dr. Walters, of annular stricture at the junction of the sigmoid flexure and the rectum, in which the evacuations were sometimes not larger than the little finger, while at other times large, bulky motions were passed. Dr. Sawyer also describes a similar case, in which he personally examined the passages, and found them of normal size and shape. Mr. Hilton Fagge, in his article in "Guy's Hospital Reports" (also quoted by Mr. Mackenzie), deprecates the importance attached to the statements of patients in regard to this matter, and thinks that a trustworthy answer to an inquiry on this head is more than can ordinarily be expected from hospital patients.

Mr. Mackenzie does not entirely give up his point, however. He admits that the presence of a tight stricture as low down as the junction of the sigmoid flexure and the rectum is compatible with the occasional passage of natural fæces, but still thinks that the passage of small, lumpy, flattened, or otherwise deformed fæces, when properly formed and full-sized fæces are *never* passed, is a sign of great value. We believe this is rather more than most observers would be willing to allow, and that at the bedside this symptom is generally considered of little or no practical value. It would be easy to quote authorities for this belief. The question is, however, not how high up a stricture must be to permit of natural passages, but how low down it must be not to permit of them. The fæces naturally take their shape from the last orifice through which they pass—the anus. If the sphincter is practically supplanted by a mass of hard stricture-tissue, or, in other words, if the stricture be close to the anus, or be forced close to it in the act of defecation, as it sometimes is—then, and then only, will the stricture show itself by impressing its stamp upon the material which passes through it.

◆

Reviews and Literary Notes.

The Utricular Glands of the Uterus, and the Glandular Organ of New Formation which is developed during Pregnancy in the Uterus of the Mammalia, including the Human Species. By Professor Giovanni Battista Ercolani, Permanent Secretary of the Academy of Sciences of Bologna, etc. To which is appended his Monograph upon the Unity of the Anatomical Type of the Placenta in all the Mammalia, and the Physiological Unity of the Nutrition of the Fœtus in all the Vertebrates, also a general summary and classification, etc. With a quarto atlas of fifteen plates. Translated from the Italian under the direction of Henry O. Marcy, A. M., M. D., Vice-President of the American Medical Association, etc. Boston: Houghton, Osgood & Co., 1880. Pp. x–305; atlas, pp. 21 and heliotype plates.

RATHER more than half of this volume is taken up with the essay on the utricular glands and on the maternal portion of the placenta; and to this part of the work we shall confine our attention, regretting that our space does not allow of an adequate consideration even of this, the groundwork of the treatise.

Among the many praiseworthy features of Professor Ercolani's work, we would first commend the tact with which he has avoided the error of too many investigators—that of hurling their processes and conclusions far above the heads of their readers. He, on the contrary, although dealing with a most recondite subject, has managed to present it in a shape to be comprehended readily by any well-educated physician. This is due in great measure to the clearness of his language, but certainly in no small degree to the fact that he leads up to his own observations by connected and critical *résumés* of the researches, deductions, and even conjectures of those who in the past have worked in the same field of inquiry. To have done this not only without prolixity, confusion, or unfairness, but with the result that we have mentioned, stamps him in itself as a great teacher.

His conclusions in regard to the utricular glands may be summarized as follows: In woman and in some of the lower animals the uterine mucous membrane is represented by simple epithelial layers, but there is no justification for the view that the human uterus has no real mucous membrane. The utricular glands open into the epithelial layer of the mucous membrane. They are in error who claim that there are two species of glands, the simple and the branching; the function of the former being to secrete the uterine mucus, and that of the latter to participate in the formation of the placenta. He has, however, observed two really distinct species in the cow and the sheep. In all animals possessed of these glands, they increase in volume during pregnancy, and pour out their secretion into the space between the chorion and the uterus. The uterine decidua of woman, as well as the so-called catamenial decidua, is the product of material elaborated by the utricular glands, and therefore can not be considered as a swelling of the mucous membrane, and still less as resulting from the extremities of the glands, from the connective tissue, and from the vessels that surround them. The numerous sieve-like openings in the human decidua are situated at points corresponding to the mouths of the utricular glands, and remain fully open to allow the constant passage of their secretion. In no animal do the villi of the chorion penetrate into the utricular glands. It is reasonable to suppose that the chief function of the utricular glands during pregnancy is to furnish material for the nutrition of the fœtus previous to the development of the maternal portion of the placenta.

In regard to the "glandular organ of new formation," it is formed during pregnancy in all mammals, woman included—in the lower animals, by a modification and transformation of the preëxisting mucous membrane of the uterus; in woman, from a stroma (itself of new formation) elaborated from the connective tissue of the inner surface of the uterus, and known as the decidua serotina. The serotina penetrates into the interior of the placenta, where its cells are transformed at different points into true fibrous tissue, more especially to circumscribe the large lacunæ of the placenta which contain the maternal blood. The same transformation in the substance of the serotina furnishes a solid wall to the utero-placental veins before they reach the uterus. When once the vascular trunks of the fœtal placenta are enveloped by the serotina, transformed into a secreting glandular organ, the numerous villi that depart from it push before them, while increasing in volume, the walls of the sheath, and are themselves thus completely clothed with it, like the fingers of a hand in a glove.

In the lower animals, except those possessed of "rudimentary cotyledons," the glandular organ is not cast off at the time of delivery but is gradually destroyed. In woman, however, it is wholly separated and expelled in a mass with the fœtal placenta, so that extensive traumatic lesion of the uterus takes place, leaving the uterine tissue bare over all that portion that had been covered by the placenta.

We regret that we have not the space to summarize the observations and arguments which lead up to these conclusions, or to allude to the many matters of practical interest treated of incidentally in the work. We will mention, however, that the editor, Dr. Marcy, after briefly quoting the views of Aveling, Williams, and Engelmann on the menstrual changes that take place in the uterine mucous membrane, agrees with the last-named author, that that membrane does not behave in such an extraordinary manner as to destroy itself and be regenerated at every normal menstruation.

The translation is excellent in the main, being marred only by a frequent misuse of tenses. Some authors' names are incorrectly spelled, as *Hirtl* (pp. 16 and 73) and *Hirlt* (index of authors) for *Hyrtl*, *Malphigi* for *Malpighi*, and *De Sinèty* for *De Sinéty*. The book is beautifully printed, and in every way creditable to the publishers. The plates are heliotype reproductions of engravings by Bettini.

Post-Mortem Examinations, with Especial Reference to Medico-Legal Practice. By Professor RUDOLPH VIRCHOW, of the Berlin Charité Hospital. Translated from the second German edition by Dr. T. P. Smith. Philadelphia: Presley Blakiston, 1880. Pp. viii–145.

THIS is a book which can not be too strongly recommended. The first point that will probably strike the general practitioner on glancing over it is that a post-mortem examination when properly performed, especially in a case of medico-legal importance, is no easy or trifling matter. Most men in this country have never seen an autopsy done with the care and thoroughness involved in the plan laid down in this book; and those who have ever seen the work ordinarily done by a coroner's deputy know what a farce such an examination generally is. Virchow takes pains to explain that a complete examination may be made in three hours, with skill and practice. We venture to say that in this country less than an hour is usually occupied by an autopsy, except when made by a teacher of pathology. We are improving in these matters, however, and this little book, when added, as it should be, to the lists of college text-books, will do good service. It can not teach a man how to perform an autopsy—no book can do that; but it will give him a general idea of what an autopsy should be.

A Handbook of Physical Diagnosis, comprising the Throat, Thorax, and Abdomen. By Dr. PAUL GUTTMANN, Privat Docent in Medicine, University of Berlin. Translated from the third German edition by Alexander Napier, M. D., etc. With a colored plate and eighty-nine fine wood engravings. New York: William Wood & Co., 1880. Pp. 344.

THIS work is one of "Wood's Library of Standard Medical Authors." Its translation into several other languages besides the English must be taken as testimony to its value. The subjects are methodically and clearly presented. Under each division the different methods of physical exploration are taken up in their order, and the signs obtained by each in health and disease are presented, and their significance pointed out.

The examination of the respiratory organs takes up 110 pages, and is followed by a chapter of 20 pages on the sputa. Skoda's classification of respiratory murmurs is adopted. Eighty pages and more are devoted to the organs of circulation. The description of organic cardiac murmurs is not so complete as it might be made without lengthening to any extent the section devoted to its consideration. It is asserted that the mitral presystolic and systolic murmurs are almost invariably associated. In the reviewer's experience the mitral presystolic murmur is frequently heard alone. The examination of the abdominal organs, the excreta, and the larynx takes up the remainder of the volume. In this handbook the student will find much to interest and profit him, and very little to criticise.

Mémoires de Chirurgie, par le Docteur G. Nepveu, Ancien Interne des Hôpitaux de Paris, etc. Avec 2 Planches. Paris: V. A. Delahaye et Cie., 1880. Pp. 720.

Every reader of French journals for the past ten years is familiar with the name of Dr. Nepveu, and the present volume is a collection of his essays which have, from time to time, appeared in those publications. They cover a diversity of subjects: bacteria, affections of the lymphatics, osteotomy, accidents following ligature of the carotid, affections of the scrotum and testicles, rupture of ovarian cysts, and others—each well written and worth possessing. The articles are, many of them, already well known, and it is only necessary to say that by collecting them into one volume the publishers have done the medical profession good service.

Muscle-Beating, or Active and Passive Home Gymnastics for Healthy and Unhealthy People. By C. Klemm. With illustrations. New York: M. L. Holbrook & Co., 1879. Pp. 56.

Much has been written, both in medical journals and in the daily press, about healthy skin and its relation to healthy bodies. Among the many means advocated for this end, exercise and friction have always held the first place. The author of this little volume brings to our notice the subject of "muscle-beating" as combining both active and passive exercise. He advocates the use of a contrivance which he calls a "muscle-beater," consisting of three elastic tubes fastened together by a handle at one end, while the other is free. These tubes have a circumference of about that of the finger, their length being such that they can be made to reach any part of the body by swinging them from the handle held in the hand. He has them of different lengths for different individuals. By its use not only is the capillary circulation stimulated, but the user has to take considerable active exercise in manipulating it. A perusal of this little book will give any one all the information requisite. We think much benefit could be derived from the systematic use of the "muscle-beater," not only by those who suffer from sluggish capillary circulation, but by all who desire to keep themselves in the best state of health.

A Treatise on Foreign Bodies in Surgical Practice. By ALFRED POULET, M. D., etc. 2 vols. New York: William Wood & Co., 1880. Pp. ix–271; vi–320.

THESE two volumes are a part of "Wood's Library of Standard Medical Authors" for the present year. The work itself is a valuable one, and the most complete on the subject published. The price of the series has been raised from twelve to fifteen dollars, and the books are correspondingly improved in appearance. Most purchasers will not regret the increased price.

Pott's Disease, its Pathology and Mechanical Treatment, with Remarks on Rotary Lateral Curvature. By NEWTON M. SHAFFER, M. D., etc. New York: G. P. Putnam's Sons, 1879. Pp. iv–82.

THROUGHOUT this little book the author uses the term "chronic spondylitis" as synonymous with Pott's disease. In dealing with the pathological questions, he considers that in the present state of our knowledge it is impossible to do much more than make an arbitrary classification of the disease into different stages, of which he enumerates four: the prodromal, the stage of pain, that of deformity, and that of abscess. He divides the cases into two general classes: that in which suppuration is a comparatively early symptom; and the non-suppurative, or that in which *caries sicca* occurs; and deals with both these classes from both the clinical and the pathological standpoint. The chapter on treatment, which constitutes the larger and better part of the book, contains many valuable suggestions. The extension by the plaster jacket is condemned for many reasons, and the whole weight of the author's influence is thrown in favor of the "method of antero-posterior support," which is fully described and figured. We have not time to enter into the merits of this brace, which the author has used for many years. To be fully appreciated and understood it should be seen in actual use, and this may easily be done. It is not open to many of the objections which apply to the plaster jacket, and the advocates of the latter would add that it was not so effectual a method of giving rest and support to a diseased spine. It is, at all events, easier to apply and remove, it does not excoriate, and in the author's hands it has for many years accomplished good results.

Health, and Health-Resorts. By JOHN WILSON, M. D., etc. Philadelphia: Porter & Coates. Sm. 8vo, pp. 288.

THIS readable little work is written rather for the guidance of the laity than as a scientific contribution to medical literature; and yet it contains many points of general interest to the profession. Much good advice is given to those who think themselves likely to be benefited by change of climate—especially to the large class who annually leave comfortable homes to go abroad and die of incurable disease; and the different popular health-resorts are considered in detail. For a practitioner who has patients to send to the winter-stations around the Mediterranean, or to the mineral springs of France or Germany, the book will serve as a practical guide.

Our Homes. By HENRY HARTSHORNE, A. M., M. D., etc. Philadelphia: Presley Blakiston, 1880. Pp. vi–149. [American Health Primers.]

THIS is the tenth book in Dr. Keen's series, and deals with construction, situation, light, warmth, ventilation, water-supply, and drainage, besides the questions of population and homes for workingmen. It is well and plainly written, and the chapter on drainage especially is clearly illustrated to show the different kinds of traps, vents, soil-pipes, and basins. There is one plate showing "how people drink sewage," which will convey to the lay reader at a glance more than many chapters of text. The subject is well selected, and the author does not fall into the error of trying to simplify what it requires years of scientific study to understand. With regard to "Our Homes," it can not be said that "a little knowledge is a dangerous thing," and, the more of this sort of literature there is in circulation, the better for the community.

Headaches; their Nature, Causes, and Treatment. By William Henry Day, M. D., etc. Third edition, with Illustrations. Philadelphia: Lindsay & Blakiston, 1880. Pp. xi–322.

This well-known work has reached a third edition, and has been somewhat enlarged by the author. Criticism at this late day is unnecessary. It will always be a book of reference for the practitioner, to which he may turn for aid in diagnosis and for practical suggestions drawn from the writer's great experience in treatment. We know of no class of cases more apt to prove a stumbling-block to young men than these which seem so simple to the sufferers, and no book on the subject from which they are likely to gain more assistance.

A Manual of Auscultation and Percussion; embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M. D. Second edition, revised. Philadelphia: Henry C. Lea, 1880. Pp. 236.

We again recommend this excellent handbook to practitioner and student. As stated in the preface, it embodies the lessons which Dr. Flint has for many years given to his private classes in auscultation and percussion. The subjects are treated in the author's eminently clear and practical style. The size of the volume and the arrangement of topics make it very convenient for ready reference.

Sore Throat: Its Nature, Varieties, and Treatment; including the Connection between Affections of the Throat and Other Diseases. By Prosser James, M. D., etc. Fourth edition. Illustrated with hand-colored plates. Philadelphia: Lindsay & Blakiston, 1880. Pp. 318.

The fact that a book reaches a fourth edition in so short a time is in itself to a certain extent a guarantee of its value. This edition is more complete than any of its predecessors, the plates being new, and the chapters on syphilitic sore throat, affections of the naso-pharynx, connection of sore throat with affections of the nose and ears, throat-deafness, and affections of the œsophagus having been added.

This little book—the first in the English language on the laryngoscope—appeared in 1860, and, though many larger ones have followed it, it still retains the place it deserves as a text-book. This is partly due to its original worth, and partly to the care the author has since taken to keep it up to the recent advances in laryngology. Though leaving much unsaid, all that it does say can be accepted with confidence by the general practitioner or student. The throat has become too large a special branch of medicine and surgery to be exhausted in a work of this size, and the writer does not attempt it. The hand-colored plates are a little overdone, but the work as a whole is very satisfactory. The index, which appears for the first time in this edition, adds to its value.

The Therapeutics of Gynecology and Obstetrics, comprising the Medical, Dietetic, and Hygienic Treatment of Diseases of Women, as set forth by distinguished contemporary Specialists. Edited by William B. Atkinson, A. M., M. D., etc. Philadelphia: D. G. Brinton, 1880. Pp. 365.

The editor of this work has evidently gone over a great deal of ground, and has gathered together a very comprehensive assemblage of the therapeutical measures employed and recommended by physicians of distinction in the treatment of the diseases peculiar to women. The book is of value, as enabling the hasty reader to get hints which, if he be the right sort of man, he will take as such only, and not as in the slightest degree a substitute for a systematic knowledge of the subject. It would have been better if references to the original publications drawn on had been oftener given.

Sea-Air and Sea-Bathing. By John H. Packard, M. D., Surgeon to the Episcopal Hospital, etc. Philadelphia: Presley Blakiston, 1880. Sm. 8vo, pp. 124.

This little book, one of the series of "American Health Primers," is decidedly the best popular work upon the subject that we have ever seen. It gives, in very agreeable language, sound and explicit advice upon all the points that are apt to come up for decision in connection with a sojourn at the seaside, for either the invalid or the pleasure-seeker. We have read it with great pleasure, and have found in it nothing that does not commend itself to our judgment.

Books and Pamphlets Received.—A Treatise on Comparative Embryology. By Francis M. Balfour, M. A., F. R. S., Fellow and Lecturer of Trinity College, Cambridge. In two volumes. Vol. I. London: Macmillan & Co., 1880. Pp. xi–492–xxii. ═══ Contributions to Orthopedic Surgery, including Observations on the Treatment of Chronic Inflammation of the Hip, Knee, and Ankle Joints by a New and Simple Method of Extension, etc. By Jos. C. Hutchison, M. D., etc. New York: G. P.

Putnam's Sons, 1880. Pp. 121. [Price $1.25.] ═══ The Practitioner's Reference Book. By Richard J. Dunglison, A. M., M. D., etc. Second edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1880. Pp. 476. ═══ The Surgery, Surgical Pathology, and Surgical Anatomy of the Female Pelvic Organs, in a Series of Plates taken from Nature, with Commentaries, Notes, and Cases. By Henry Savage, M. D. (London), F. R. C. S. E., one of the Consulting Medical Officers of the Samaritan Hospital for Women. Third edition, revised and greatly extended. Thirty-two plates and twenty-two wood-engravings, with special illustrations of the operations on vesico-vaginal fistula, ovariotomy, and perineal operations. New York: William Wood & Co., 1880. Pp. 119. ═══ Further Contribution to the Study of Fractures of the Inferior Extremity of the Radius, Differentiation of Longitudinal and Transverse Fractures, and the Causes which produce them. By L. S. Pilcher, M. D., Brooklyn, N. Y. Pp. 16. [From the author.] ═══ Neuralgia: Its Nature and Curative Treatment. By Thomas Stretch Dowse, M. D., F. R. C. P. E., etc. New York: G. P. Putnam's Sons, 1880. Pp. xiii–198. [Price $2.25.] ═══ Report of the Examination of 27,927 School Children for Color-Blindness. By B. Joy Jeffries, A. M., M. D. Boston, 1880 [School document, No. 13]. ═══ Aguas Termo-Bicarbonatadas-Nitrogenadas de Urberuaga de Ubilla (Merindad de Marquina), etc. Madrid, E. Vicente, 1880. Pp. 99. ═══ A Reply to Criticisms on "The Problems of Insanity," with Remarks on the Gosling Case. Delivered before the New York Medico-Legal Society, April 16, 1880. By George M. Beard, A. M., M. D. Pp. 34. [From the author.] ═══ What Constitutes a Discovery in Science. By George M. Beard, A. M., M. D. New York, 1880. Pp. 7. [From the author.] ═══ Proceedings of the Academy of Natural Sciences of Philadelphia. Part I.—Jan., Feb., and March, 1880. Editor: Edward J. Nolan, M. D. Philadelphia, 1880. Pp. 152. ═══ Transactions of the American Gynecological Society. Volume IV, for the year 1879. Boston: Houghton, Mifflin & Co., 1880. Pp. viii–506. ═══ Transactions of the Medical Society of the State of Tennessee, at its Forty-Seventh Annual Meeting, 1880. Nashville, 1880. Pp. 158–iii. ═══ The American Medical College Association, fourth annual meeting, etc. Detroit, 1880. Pp. 26. ═══ L'Année Médicale (deuxième année), 1879. Résumé des progrès réalisés dans les sciences médicales. Publié sous la direction du Dr. Bourneville. Paris: E. Plon et Cie., 1880. Sm. 8vo. Pp. vi–396. ═══ Second Annual Report of the State Board of Health of the State of Rhode Island, for the Year ending Dec. 31, 1879. Providence, 1880. Pp. 314. ═══ Rules and Regulations of the Board of Health, State of Louisiana, etc. New Orleans: L. Graham, printer, 1880. ═══ Annual Announcement of Trinity Medical School, session 1880–'81. Toronto: Dudley & Burns, printers, 1880. Pp. 24. ═══ Beiträge zur gerichtlichen Medicin. Von Prof. Dr. Hermann Friedberg in Breslau. Pp. 16. [Reprint.—From the author.] ═══ Clinical Notes on the Elongations of the Cervix Uteri. By William Goodell, A. M., M. D. Pp. 25.

[Reprint.] ===== An Unique Case of Conjunctival Lupus. By E. S. Peck. New York: G. P. Putnam's Sons, 1880. Pp. 7. [Reprint.] ===== On Coccygodynia. A Lecture delivered in Chicago Medical College. By Edward W. Jenks, M. D., LL. D., etc. Chicago: Bulletin Printing Co., 1880. Pp. 15. [Reprint.] ===== Contributions to Gynæcology, No. X. I. Fibro-sarcomatous Tumor of the Uterus; Operation; Recovery. II. Cancer of the Rectum; Excision; Recovery. By John Byrne, M. D., M. R. C. S. E., etc. New York: G. P. Putnam's Sons, 1880. Pp. 13. [Reprint.] ===== The Treatment of Puerperal Septicæmia by Intra-Uterine Injections. By Edward W. Jenks, M. D., LL. D. Pp. 24. [Reprint.—From the author.] ===== Kolpo-Cystotomy by Electro-Cautery, with Remarks on Other Methods of Operating. By John Byrne, M. D., M. R. C. S. E., etc. Pp. 8. [Reprint.] ===== The Therapeutic Value of the Iodide of Ethyl. By Robert M. Lawrence, M. D., Boston. Pp. 8. [Reprint.—From the author.] ===== Note on an Abnormal Distribution, hitherto unobserved, of the Supra-orbital and Infra-orbital Nerves, explanatory of the Recurrence of Certain Neuralgias. By A. H. P. Leuf, student of medicine. New York: G. P. Putnam's Sons, 1880. Pp. 5. [Reprint.—From the author.] ===== Remarks on Diabetes Mellitus. By Richard McSherry, M. D., Professor of Principles and Practice of Medicine, University of Maryland. Pp. 7. [Reprint.—From the author.] ===== The Irritable Bladder in the Female. By L. S. Oppenheimer, M. D., Demonstrator of Histology, etc., in the University of Louisville. Louisville: John P. Morton & Co., 1880. Pp. 14. [Reprint.—From the author.] ===== A Case of Fracture of the Nasal Bones treated by an Improved Method. Lewis D. Mason, M. D. Pp. 2. [Reprint.—From the author.] ===== An Improved Method of Treating Depressed Fractures of the Nasal Bones. Lewis D. Mason, M. D. Pp. 5. [Reprint.—From the author.]

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

A stated meeting was held March 18, 1880, Fordyce Barker, M. D., LL. D., President, in the chair.

Entire Obstruction of the Bowels for Three Weeks: Temporary Relief afforded by Colotomy.—Dr. A. C. Post reported a case, of which the following is a summary. The patient was a man, aged fifty-two years, who had enjoyed good health until June, 1879, when he had an attack of acute dysentery, by which he was confined to the house for two weeks. Since that time his bowels had never been free from irritation. After the 4th of November he was confined to his bed. His evacuations at first were liquid, mixed with blood and mucus, of a dark-brown color and of an offensive odor, and occurred as often as once in two hours. On the 5th of December he had a sudden gush of pus, tinged with blood, amounting to half a pint, and attended with a chill. Soon after that he ceased to have any fæcal evacuations, but had very frequent discharges of bloody, purulent matter, with much tenesmus. He had been treated by homœopathic physicians, who had finally informed him that he had cancer of the colon, that nothing could be done for his relief, and that death within a few days was inevitable. Dr. Post saw him December 27th, when he had been three weeks without a fæcal evacuation. Every part of the abdomen was tympanitic on percussion. The right index-finger was introduced into the rectum, and along the anterior wall, beyond the prostate, he recognized an obstruction caused by a hard swelling, the outlines of which he could not very accurately define on account of its distance from the anus. A decided opinion was not formed concerning the character of the morbid growth. On the following day Dr. H. B. Sands saw the patient, and expressed the opinion that there was a cancerous deposit in the anterior wall of the rectum. He agreed with Dr. Post that colotomy held out the only prospect of relief. On the 28th of December the patient began to have stercoraceous vomiting, which was repeated on the 29th, the day on which colotomy was performed by Dr. Post. The wound was dressed with carbolized lint and oakum. [A detailed history of the case then followed. It terminated fatally on the 11th of February.] In reviewing the case, Dr. Post deemed the following points worthy of special mention.

In the first place there was good reason to believe that if colotomy had been performed much earlier, before the patient's strength had been so reduced, he would have rallied more perfectly, and perhaps might have recovered. *Second.* As it was, his life was prolonged for several weeks, and his condition was very much improved. *Third.* Although there was no *post-mortem* examination, the history of the case seemed to indicate that the obstruction was not the result of cancerous deposit, but rather of inflammatory hyperplasia, resulting from perforating ulcer of the rectum, following dysentery. The fact that, on several occasions, there was a sudden and copious escape of pus, seemed to favor this view. There was reason to believe that serious obstructions of the bowels, undermining the health and jeoparding the lives of patients, often occurred as the remote results of severe attacks of dysentery. Dr. Post remarked that the dangerous character of obstruction of the bowels, from various causes, had long been familiar to the medical profession, but it appeared to him that there had been too great a disposition to rely upon the use of internal remedies, to the exclusion of surgical operations, in the treatment of these formidable maladies. ═══ Dr. James L. Little referred to the case of a man forty-eight years old, in whom complete intestinal obstruction had existed for sixty days. For two weeks the patient had vomited more or less, and had hiccough, and the abdominal walls were greatly distended. A tube could be introduced over two feet, without difficulty, and injections were given through it, but without benefit, although occasionally, when the tube was removed, the extremity was found covered with fæcal matter. The patient had suffered for over twelve years with constipation and great pain in defecation, and stated that the fæces were of small size and sometimes flattened. The diagnosis was that a stricture probably existed high up in the colon, and that the gut was distended above the stricture with fæcal matter. The only means of relief seemed to be in colotomy, which Dr. Little performed, and during the first twenty-four hours after the operation about three quarts of clay-colored, semi-solid fæcal matter were discharged through the artificial opening. The patient recovered, was yet living (the operation was done three years ago, in Vermont), and the artificial anus remained. The only peculiarity in the case after the operation was the difficulty in keeping the wound open. At the end of two months it had entirely closed, and Dr. Porter, the attending physician, was obliged to make an incision and introduce a tent. The opening, however, closed the second time, and remained closed six weeks. The knife was again used, but the wound again closed. It closed, in all, four times, but finally remained open permanently. On the seventh day after the operation, two full movements of hard fæcal matter occurred through the rectum. Since that time no discharge from the rectum had taken place.

Dr. H. J. **Garrigues** referred to a case in which complete intestinal obstruction existed in a nun, twenty years of age, for fourteen days. She vomited everything, but had no stercoraceous vomiting; all internal remedies were unavailing. A tube could be introduced as high as the junction of the descending with the transverse portion of the colon, but injections through it gave no relief. Volvulus was suspected, and laparotomy was contemplated. Finally, while taking an injection that contained about a teaspoonful of green soap, the patient suddenly felt something give way, and immediately she was relieved of her distress. Two days afterward she had a large pultaceous discharge from the bowels, and was well. He thought the sudden recovery rather indicated volvulus as the cause of the obstruction.

Bromide of Ethyl as an Anæsthetic.—Dr. J. **Marion Sims** read a paper in which he gave the history of an interesting case, after reviewing the literature of the agent. For his knowledge of the use of ethyl he was indebted to Dr. R. J. Levis, of Philadelphia, who administered it "on a handkerchief or small napkin folded up to a space of about four inches square, and then laid on a larger napkin, folded so as to be large enough to cover the entire face of the patient." It had been claimed for ethyl that it produced anæsthesia more rapidly than chloroform, was eliminated from the system more rapidly by the lungs and kidneys than any other anæsthetic, and was less apt to produce vomiting than ether or chloroform. The profession had been for a long time in search of an anæsthetic as pleasant to take as chloroform and as safe as ether, and from Dr. Levis's experience Dr. Sims felt quite convinced that the long-looked-for agent had been found, and at once determined to give it a trial. In his first case he failed utterly to produce its anæsthetic effect. In his next case two drachms of the ethyl produced anæsthesia in two minutes, and complete consciousness was restored within eight minutes. In the second case it was so given that no air could be breathed that was not loaded with ethyl vapor. So pleased was Dr. Sims with the result in the second case that he determined to administer it in a case of Battey's operation. The patient, twenty-five years old, had been subject to epileptic attacks for the last five years, but was otherwise in perfect health. After a variety of tentative efforts had failed to give her any relief, he advised her to submit to Battey's operation, which was performed February 9, 1880. Everything being ready, a drachm of bromide of ethyl was poured on a folded napkin, and held closely over the mouth and nose. In a minute more another drachm was poured on the napkin, and at the end of two minutes she became insensible and relaxed; but the conjunctiva was sensitive to the touch, her eyes rolled about, and her breathing was very rapid. At the end of five minutes (the hydrobromic ether having been added as required) she was perfectly insensible, and breathing sixty times a minute. This very rapid breathing would moderate whenever the napkin was removed so as to allow the access of pure air, and would always increase when fresh ether was poured on the napkin. At the end of ten minutes she could be kept quiet, breathing softly and regularly, but always above the normal rapidity. The pulse was now eighty-six, full and strong. During the first twenty minutes about two ounces of the hydrobromic ether had been used. At that time she vomited freely. At the end of forty minutes she vomited again, with severe straining. On three occasions during the operation there was considerable opisthotonos, with twitching and rigidity of the muscles of the limbs, and constant rolling of the eyes in every direction. Dr. Nash thought these were similar to those of her epileptic attacks, in one of which he had seen her. The operation lasted an hour and a half. Her condition was good during the whole time, and her pulse was strong and full. The rapid, short breathing was a peculiar feature; the sensitiveness of the conjunctivæ continued throughout, and her eyeballs were in almost constant motion. There was no unusual dilatation of the pupils. In all, about four and a half or five ounces of ethyl were used. She recovered quickly from the anæsthesia after being put to bed, but she had the most distressing retching and vomiting imaginable. The straining was so violent that Dr. Nash more than once placed his hand over the abdomen to prevent the wound from bursting asunder. From the moment of returning consciousness she complained of violent pain in the head, and to relieve this pain she got a fourth of a grain of morphine hypodermically. In an hour this was repeated. Two hours after the operation (6.30) the pulse was sixty, full and strong. 6.15.—Distressing retching and vomiting had continued almost uninterruptedly ever since the operation. The headache was very severe. One ounce of urine was drawn by catheter. 7.30.—Nausea and retching continued, but no vomiting; she still had severe pain in the head. A thin, yellowish-brown movement from the bowels took place, watery, of but a few ounces; very offensive, having the smell of bromide of ethyl. At 7 A. M. the next day her breath was highly charged with the ethyl odor. The movements from the bowels were brownish, dirty water, with some mucus. At 8.40 a catheter was introduced, but no urine was obtained; pulse thirty-six; temperature 102·1° F. At 10.30 a teaspoonful of high-colored urine was drawn. At 11 A. M. there were severe convulsions with frantic ravings. The convulsions ceased at 11.40, with heart-rending screams, and she died at 12.15 P. M., about twenty-one hours after the operation. *Post-mortem* (twenty hours after death).—The edges of the wound were adherent throughout. Two and a half ounces of bloody serum were found in the peritoneal cavity, three drachms of it being in Douglas's pouch, below the retroverted uterus. There was no exudation of lymph, and no sign of peritonitis. The left broad ligament was united to the sigmoid flexure by old and strong adhesions. The lower part of the ileum, for about eighteen inches, looked dark and congested. The colon was also of a dark-brown color. The report of the pathologist concerning the kidneys was as follows: "The kidneys, to the naked eye, looked normal. Under the microscope there was a slight increase of the interstitial connective tissue. Many of the convoluted tubules showed swollen and coarsely granular epithelia, and a considerably narrowed central caliber, a characteristic feature of acute catarrhal nephritis." Dr. Sims discussed the case at considerable length with special reference to the cause of death, and his inference was that the anæsthetic was the cause of death, while the manner of death might have been by uræmic poisoning. The lesson from this was, never to give bromide of ethyl in prolonged operations, and never to give it where there was organic disease of the kidneys. ═══

Dr. R. J. Levis, of Philadelphia, by invitation, remarked that the only explanation he could offer for the difference in the results obtained by Dr. Sims and by himself must be found in the mode of administering the hydrobromic ether, or bromide of ethyl. He had learned that the proper method was, to make a rapid impression, which could be done only by holding the folded napkin, having two or three drachms of the ethyl in the center, close over the mouth and nose, thus preventing the patient from inhaling any air except that laden with the anæsthetic. He had, in that manner, nearly always succeeded in producing complete anæsthesia by the use of two or three drachms, and within two or three minutes—the average time, with good respiration, being about three minutes. The duration of the operation and the quantity of ethyl used in Dr. Sims's case he regarded as important factors. His longest operation occupied only forty minutes, and the quantity of ethyl used was eleven drachms. He had not seen unpleasant after-effects in any of his cases. Nausea and vomiting were, perhaps, as likely to occur as after the use of ether, if the quantity of ethyl used was considerable. The quality of the article he regarded as very important, and since he had used Wyeth's preparation the tendency to nausea had been less marked than formerly. He had noticed the persistent odor, mentioned by Dr. Sims, when the same preparation which Dr. Sims used was employed. ═══ Dr. E. R. **Squibb**, by invitation, said that his views were entirely theoretical with reference to the bromide of ethyl (which was not "ethyl") as an anæsthetic. As a chemical rule, anæsthetics which were the least dangerous were the most simple in their molecular composition, and when decomposed yielded elements which, physiologically, were known to be most innocuous. The two safest, namely, nitrous oxide and the oxide of ethyl, or ether, when decomposed, yielded comparatively innocuous elements. In the bromide of ethyl the oxygen of the ordinary ether was replaced by bromine, and the compound contained seventy-three per cent. of bromine. Now, when the effects of all known anæsthetics were compared, it would be found that those best borne were simplest in their nature; that is, the compound ethers were less safe than the simple ones, and both the compound and the simple ethers seemed to be safe in direct proportion to the simplicity of their composition, and the innocuousness of the elements of which they were composed. Bromine was an irritant poison; bromide of ethyl was very easily decomposed. If any part of it was decomposed, and the seventy-three per cent. of bromine entered the system, it was easy to understand that dangerous effects might be produced, whereas if all of it remained as bromide of ethyl it might be less dangerous, but yet not harmless, as oxide of ethyl, or ether, was. The point could be further illustrated by supposing the existence of an arsenide of ethyl, the activity of which in producing dangerous effects, as compared with the bromide of ethyl, would be represented by the difference between the activity of bromine and the activity of arsenic as irritant poisons. Dr. Squibb thought that the observations of chemistry pointed toward the conclusion that compound ethers were less safe than simple ethers, and that simple ethers were still less safe than the simple oxides; that is, a simple oxide of nitrogen was found to be an anæsthetic, and, so far as known, was the safest of all anæsthetics; and, if any portion of such an anæsthetic were to split up in the economy, it would split into innocuous elements, such as oxygen and nitrogen. If it were admitted that such theoretical argument had any value, he thought it was easy to understand some of the dangerous effects produced when compound ethers were used as anæsthetics, and that we could logically argue something from the chemical composition of agents as to which would be safest, especially in the application of agents that carried us so near the dividing line between life and death. ═══ Dr. J. C. **Dalton** remarked that, while listening to Dr. Sims's paper, he had been impressed relative to the different kinds of danger which might be developed by different anæsthetics. He thought it generally accepted that ether, when dangerous as an anæsthetic, was mainly so in consequence of the presence of some morbid change in some vital organ; that is, with a healthy body ether was as safe an anæsthetic as could be had. In Dr. Sims's case death took place long after the ethyl was administered, and, apparently, was due to the persistent possession which the agent had taken of the entire system, and which, in some unexplained way, produced the symptoms already detailed. Death from chloroform occurred in an entirely different manner: without convulsions, without marked symptoms, and odoriferous bodies had not been observed. The difference between the manner in which death had been produced by chloroform and by ether when given to animals had, in his experience, been very marked—so much so that long ago he had abandoned the habitual use of chloroform in experimentation, because it was so annoying to have an animal die suddenly and unexpectedly, and without known cause other than the mere fact that it had received chloroform, just as he was ready for an experiment. In the use of bromide of ethyl there seemed to be another mode of death, which, perhaps, would be as difficult to avoid as the sudden death produced by chloroform. ═══ Dr. A. C. Post remarked that it had been his custom to precede the use of anæsthetics, in operations of unusual length, by the hypodermic injection of seven or eight minims of Magendie's solution of sulphate of morphia, according to the practice of Nussbaum. He was inclined to think that it added to the safety of the patient, because anæsthesia could be maintained for a long time and more perfectly, and with a smaller quantity of the anæsthetic than when the morphia was not used. It also added to the comfort of the surgeon by relieving his mind from uneasiness about the action of the anæsthetic. ═══ Dr. J. L. Little referred to two cases in which he had used the bromide of ethyl (Wyeth's preparation). The first patient, a boy four years old, was completely anæsthetized within two minutes by two drachms of the ethyl. Within five minutes from the removal of the cloth the child was able to respond intelligently. The breathing was snoring, the pupils were contracted, and there was no vomiting. The anæsthesia was kept up for only a few minutes, as the operation was a short one. The second patient was an adult, in good general condition. Two or three drachms of the ethyl were placed in a napkin, which was held close over his mouth and nose, and at the end of three minutes no special effect had been produced except powerful struggling on the part of the patient. The ethyl was used more freely; the patient struggled violently; the pupils dilated and contracted alternately, the eyeballs rolled about, and at the end of eight minutes, and after the use of two ounces and two drachms of the anæsthetic, the condition of the man was somewhat alarming, and the inhalation was discontinued. There was neither nausea nor vomiting. Both the pulse and the respiration became exceedingly rapid. The patient came from under the influence of the anæsthetic, apparently, within three or four minutes. Sulphuric ether was then administered, and the patient was anæsthetized without the slightest difficulty. ═══ The President referred to the possible influence produced by carbonic acid gas, as one of the requirements seemed to be that the cloth containing the ethyl should be held very close over the mouth and nose. ═══ Dr. Wylie remarked that, in the use of the bromide of ethyl as an anæsthetic, he had endeavored to follow Dr. Levis's directions in the most exact manner. He was satisfied that it could not be used with the same freedom as could ether. ═══ Dr. Squibb referred to two points: 1. In the case of many substances employed as anæsthetics, if not of all, the anæsthesia was a superadded condition of quantity to the other and more lasting effects produced by the agent; therefore, it was necessary to be cautious in regarding the disappearance of the anæsthesia as proof of the end of danger or of the cessation of the entire effects of the agent. In other words, the sudden disappearance of anæsthesia after the administration had ceased did not indicate that the effects produced by the drug had passed away, but only that it was no longer in sufficient quantity or in proper condition to keep up anæsthesia; 2. Many of the symptoms in Dr. Sims's case were precisely those of an irritant poison. If the superadded condition of anæsthesia were subtracted, and the case studied as one of bromine poisoning, by some gaseous form of bromine, it might be considered, from the known character of the agent, as an almost typical case. A better illustration of the effect produced by an irritant poison, he thought, could hardly be found—not only from the symptoms, but also from the *post-mortem* appearances of the alimentary canal and the kidneys. He would regard the case, therefore, as one of irritant poisoning, and as one that well illustrated the fact, too often overlooked in the search after prompt and potent action, that agents of very great power for good must have the same power for harm. ═══ Dr. **Roberts**, of Philadelphia, by invitation, remarked that he had administered the bromide of ethyl as an anæsthetic many times, and one of the chief benefits arising from substituting it for ether was, as he thought, that the ethyl affected the respiration but little, except to increase its frequency to a certain extent, but in no case had he seen hypersecretion of mucus in the bronchi, which was so annoying in etherization. As a rule, the pupils had been dilated during the period of the most profound anæsthesia. It was a little difficult to judge of the pulse. The eyes were not so suffused as in etherization. As a rule, patients came from under its influence promptly. In two cases he had observed nausea. He was not an advocate for the agent, but simply felt interested in assisting to place it among the agents which had been used successfully as anæsthetics. He thought that, perhaps, sufficient stress had not been laid upon the gravity of the operation in Dr. Sims's case as a factor in the causes of death. It was also possible that the convulsive movements noticed were influenced by the previous epileptic condition of the patient. He thought that it might be difficult to use the bromide of ethyl in plastic operations about the face, because of its evanescent effects as an anæsthetic.

NEW YORK OBSTETRICAL SOCIETY.

A STATED meeting was held April 6, 1880, Dr. **Frank P. Foster** in the chair.

Sarcoma of the Kidney.—Dr. **A. Jacobi** presented a specimen with the following history. A boy, born July 27, 1876, was first seen by him when two years and eight months old, March 15, 1879. The father reported that his (the father's) mother had had carcinoma, that he had lost seven brothers and sisters, one having died of inflammation of the bowels, but none of cancer. The boy had had summer diarrhœa several months in his second year. In March, 1878, he was taken with convulsions, became comatose, and passed no urine. On the next day he voided a large quantity of urine and a good deal of coagulated blood. One week afterward he again passed bloody urine, but without any symptoms of either convulsions or coma. At the same time he appeared to be quite well. In May, 1878, his abdomen began to swell, and his abdominal cavity contained something hard in the left side. The hardness which Dr. Jacobi felt when the boy was first brought to him was not equal in all parts of the tumor. The larger portion of the mass was hard, but there was a sense of fluctuation at certain points, and the growth filled the abdominal cavity almost completely, especially upon the left side. There was a good deal of tympanites to the right of the vertebral column, decidedly less upon the left. The spleen and liver were normal. Urination was frequent, occasionally involuntary. The appetite was good. The epiphyses of a number of his bones were rachitic. He still perspired freely upon his head, especially in the occipital region. Emaciation was not marked, and his general appearance was tolerably good. On the 6th of May it was noted that the tumor had grown considerably. In the mean time the boy had been taking cod-liver oil and syr. ferri iodid., which did not interfere with digestion. He vomited occasionally, particularly in the morning. There was a trace of albumen in the urine. October 2, 1879, for the purpose of determining whether or not there was fluid present, Dr. Jacobi made a number of punctures into portions of the tumor that had a cyst-like feel, but failed to obtain any fluid. At that time the exact measurements were as follows: Circumference of body at ensiform cartilage, 25 inches; distance from manubrium to umbilicus, 25 inches; circumference at umbilicus, 23½ inches, and from the anterior superior spinous process of one ilium to the other, 7½ inches. Later in the same month the tumor had so increased in size as to fill the abdominal cavity, and reached down to within one inch of the anterior spine of the ilium on the right side. *December 12, 1879.*—General appearance of the patient not so good. The tumor had evidently grown a great deal, and he suffered from abdominal pain, particularly when in the horizontal posture. He suffered at night especially. The urine contained a small quantity of albumen, and a large quantity of urates. The pulse was quite regular. Now and then, however, he had retention of urine, with considerable pain; and it was occasionally necessary to use the catheter. Sometimes, when the attending physician called to use the catheter, the child would refuse to have it introduced, and then pass a large quantity of urine without blood or any foreign element—occasionally with small discolored coagula—and was relieved. In that manner the patient lived until the 8th of March, 1880, suffering a great deal of pain, having very troublesome and sleepless nights, and showing, toward the last, marked emaciation. At the beginning the diagnosis was sarcoma of the left kidney. The tumor had existed for some time before Dr. Jacobi first saw the patient, and he concluded that, if it had been carcinomatous, the boy's general condition would not have been so good as it was at that time. The diagnosis lay between sarcoma and carcinoma, and was especially so restricted after a few punctures were made for the purpose of ascertaining whether or not the indistinct sense of fluctuation could be referred to cysts. When no liquid was obtained he had concluded that he had to deal with a sarcoma, and, furthermore, a congenital sarcoma. At the autopsy a tumor of about the size of a man's head was removed. The right kidney was quite normal. The tumor consisted of a sarcomatous mass without cysts, but it contained peculiar nodules that appeared to be entirely distinct from the main portion of the growth, presenting somewhat the appearance of polypi in the uterine cavity. There was a thick elastic membrane forming the wall of a cavity in which each one of the small masses lay, and, as there was some freshly extravasated blood in the neighborhood, it was thought altogether probable that the loosening of the little masses had been caused by extravasation of blood into the elastic connective tissue. A number of such nests were found, and also a number of extravasations into the connective tissue found in the tumor. Dr. Jacobi remarked that it had been stated by one author that there were only nine authenticated cases of congenital sarcoma on record, a statement which he believed was incorrect, because he had already seen five or six cases within the last twenty-five years. The specimen presented was the largest he had ever seen. It had been kept in Wickersheimer's fluid, was perfectly pliable, and had retained its color.

CONGENITAL STENOSIS OF THE PULMONARY ARTERY.—Dr. B. F. DAWSON presented a heart removed from an infant born cyanosed at full term, and which lived only twenty-eight hours. It was supposed to have atelectasis, but the autopsy revealed complete stenosis of the pulmonary artery, and nearly complete obliteration of the right ventricle. The aorta was normal. ===== Dr. JACOBI referred to the two views entertained with reference to the etiology of such malformations. The *first* was that held by Rokitansky, who, as late as 1875, wrote a work on defects in the septa of the heart, in which he maintained that, in the majority of cases, they were due to insufficiency in the amount of formative material, or arrest of development. Dr. Jacobi believed, however, that Rokitansky had overlooked the fact that some other defects also existed, and that in some of the cases in which defect in the septum of the ventricles was found, perhaps complete, there was simply contraction or total obstruction of the conus arteriosus or the pulmonary artery itself. The *second* was the view that, in a number of cases, the malformation had an inflammatory origin. In a large majority of cases, the endocarditis that produced it was local; it might be general. At the beginning of the third month or the end of the second month of gestation, endocarditis had been observed, and when it occurred new tissue was formed, and thickening was the result—sometimes of the conus arteriosus only, sometimes of the entire ventricle, and upon the degree of inflammation depended whether there was total or only partial stenosis. The degree of inflammation depended also upon the development of the pulmonary artery —whether it was large or small; whether its walls were normal with reference to thickness, or were as thin as the smallest veins; and especially whether or not muscular tissue was present. Occasionally, in such cases, a thickening was found around the orifice of the pulmonary artery. When there was total obstruction, as in Dr. Dawson's specimen, the ventricle was filled with blood, and it had no other function than that of emptying itself through the same opening at which the blood rushed in. In such cases, if the cavity of the ventricle was very small the muscle became very thick. The endocardium was thick also, probably not as the result of the original inflammation, because the thickening was general, but in consequence of the constant labor of the ventricle in receiving and disposing of its blood through a single opening. If the obstruction occurred early, and the blood, not participating in the circulation, coagulated, the ventricle would be obliterated. Those were the cases in which a single ventricle, with two auricles, was found. When there was no right ventricle, or it was very small, or there was complete obstruction of the pulmonary artery, the child did not live, and it died exactly as in Dr. Dawson's case. If precisely such an obstruction had taken place as the result of insufficient amount of formative material, an open septum of the ventricles would have been found; and in these cases cyanosis would not be present, only a weakened circulation, and the person might live from five to twenty years, and in one case upon record the age of forty years had been reached. The number of instances in which congenital disease of the heart had been found, but which had not been suspected during life, was probably about thirty. In such cases, however, where death did not occur in consequence of complete obstruction, the infants or young children occasionally showed signs of cyanosis, had a flabby look, perhaps had certain brain symptoms, such as twitchings, convulsions, and paralysis, and died without a definite diagnosis having been made.

LACERATION OF THE UMBILICAL CORD.—Dr. C. S. WARD reported a case in which, while the woman was in the obstetric position, and the child lying upon the edge of the bed, after delivery by version, the placenta was expelled with such suddenness and force as to be thrown from the vagina upon the edge of the bed, from which it fell to the floor, tearing off the cord at the umbilicus. There was no hæmorrhage, but, to guard against its occurrence secondarily, a needle was passed and a figure-of-8 ligature applied. No unpleasant symptoms followed. The membranes came away entire with the placenta.

A STATED meeting was held April 20, 1880, Dr. W. T. LUSK, President, in the chair.

BATTEY'S OPERATION.—Dr. B. F. DAWSON related the history of a patient from whom he had removed both ovaries. She was twenty-six and a half years of age, and had long suffered from intense pelvic neuralgia. She began to menstruate at the age of fifteen, and from the first experienced more pain than she had been informed was normal. For about two years her symptoms were not much intensified, but at the end of this time her menstrual periods became prolonged and the pain aggravated. For three or four years she continued to suffer considerably, and finally, the pains becoming more and more severe, she resorted to medical treatment—sedatives being the principal remedies used. About two years ago she came from Ireland to this country, and soon afterward the pelvic pain increased so that for weeks she was confined to her bed, and resorted to large and frequent doses of opium. One year ago she came under the treatment of a New York physician, but no relief was obtained. She was afterward seen by Dr. Caldwell, of New York, who requested Dr. Dawson to take charge of the case. The patient was a tall, well-developed girl, and gave a history of "fainting-fits" of an epileptiform character. She was exceedingly irritable and nervous, and was accustomed to the use of large doses of opium. When Dr. Dawson first saw her in one of her paroxysms, he gave her a full dose of morphine hypodermically, and had been obliged to repeat this often. In the course of three weeks her tolerance had increased to such an extent that thirty minims of Magendie's solution, administered hypodermically, produced only a quieting effect without relief of the ovarian pain. Her condition was such that a consultation was held with Dr. Thomas, Dr. Lee, and Dr. Noeggerath, and it was decided that an operation for the removal of the ovaries was justifiable. There was extreme sensitiveness of both ovaries, and the right one was slightly enlarged. The patient was willing to have the operation performed when the facts were presented to her. Accordingly, on the 8th of April, Dr. Dawson made an abdominal incision two and three fourths inches long, through which the ovaries were easily reached. The left ovary was removed by means of Paquelin's cautery, a strong silk ligature having previously been tied around its attachment. It was proposed to remove the right ovary in the same way, but, as the cautery failed to work, the scissors were used instead. The patient came out from the effect of the anæsthetic well, and at 11 P. M. of the same day her temperature was 99·5° F., and her pulse 90. She was placed on moderate doses of opium. The temperature was at no time above 104°, and at that for but a few hours on the fourth day. On the 14th she had a slight uterine hæmorrhage, without pain. On the 17th the sutures were removed, the wound having entirely healed. On the 20th she met Dr. Dawson at the door of her room. The right ovary showed a cyst, which had broken during its removal. The left ovary also showed slight cystic degeneration in one portion. The patient now complained of no pain, and had taken no more opium or sedatives of any sort. She was determined to break herself of the opium-habit. ═══ Dr. WARD asked if the hæmorrhage which began on the morning of the 14th might not have been a metrostaxis instead of a menstrual flow. ═══ Dr. **Dawson** was not positive that it was a menstrual flow. ═══ Dr. **Lee** said he had examined the patient per vaginam previous to the operation, and had thought the ovary adherent to the right side of the vagina, in consequence of which he expected that considerable difficulty would be found in enucleating it. But when the operation was performed there was not the slightest difficulty in bringing the ovary up. He mentioned this fact because conditions indicative of an adherent ovary had been recognized as an argument against the operation. ═══ Dr. **Emmet** thought it would have been better to first break up the opium-habit, for the neuralgic condition might have depended upon that.

Fibro-myoma of the Uterus.—Dr. **Dawson** presented a uterine fibroid which he had removed two days before. Owing to the urgency of the patient's condition, he had decided to remove the tumor promptly, and, to facilitate its removal, he had placed two cloth-tents within the os. On the following day, when he came to operate, he found that one of the tents had passed far into the uterus, and the other out into the vagina, so that the cervix was not dilated so much as was desirable. The uterine cavity measured five and a half inches, and the os was dilated to the size of a quarter of a dollar. After bilateral division of the cervix with the galvanic-cautery knife (without hæmorrhage), the tumor was readily detached by means of a cautery-wire, and then delivered with forceps. The cavity was washed out with a weak solution of iodine, and ergot was given. On the following day the uterus measured two and a half inches, and the patient was comfortable, free from pain or fever, and with very little uterine discharge. She had continued to improve rapidly. The case was interesting as showing the facility with which some tumors might be removed from the uterus with the galvanic cautery.

Porro's Operation.—By invitation of the President, Dr. **Isaac E. Taylor** related the history of the case in which he had performed the first successful operation of this kind in this country, and showed the uterus removed. The patient was twenty-seven years of age, and of good constitution. She was four feet four and a half inches in height, a defect in stature due to a kyphosis and slight scoliosis. Her pelvis was greatly contracted at the outlet, measuring 1¼ inch between the tubera ischiorum, and 2½ inches from the coccyx to the pubes. Five years before, Dr. Taylor had delivered her of a child weighing eleven and a half pounds, by craniotomy and cranioclasm. She recovered without an unpleasant symptom. When she again became pregnant she was decided and emphatic in her resolution to have a living child, notwithstanding she had several times been warned of the danger of allowing gestation to go on to term, and of the uncertainty of the child being born alive. On the evening of April 7th Dr. Taylor saw her in incipient labor, the pains occurring at intervals of an hour. Early the following morning the pains were occurring every three-quarters of an hour. It was decided to operate early. At three o'clock she was placed under ether. From the time of the first incision until a ligature was thrown around the cervix and the uterus was removed, ten minutes elapsed. The first incision, which was five inches in length, caused no bleeding, but when the uterus was opened the hæmorrhage was very free. The finger being introduced through the opening, the placenta was recognized, and, with one hand in the uterus and the other on the left thigh of the child, delivery was effected, and in a few seconds the child cried. A fish-line ligature was first thrown around the uterus, the placenta remaining in; and immediately following this a permanent ligature of carbolized silk was applied. The uterus was divided and removed with the placenta in it, and then the abdomen was closed. The woman remained on the table some two hours. From that time on, her condition was excellent. On the sixth day the sutures were removed. Three or four hours afterward there was a little hæmorrhage, and the wound had opened superficially to a slight extent. It had now closed almost entirely.

◆

Reports on the Progress of Medicine.

QUARTERLY REPORT ON SURGERY.

No. III.

By CHARLES B. KELSEY, M. D.,
SURGEON TO THE EAST SIDE INFIRMARY FOR DISEASES OF THE RECTUM.

1. **Ormerod**, J. A.—Bilateral paralysis of the muscles supplied by the recurrent laryngeal nerve. "Lancet," March 13, 1880.
2. **Mason**, E.—Four cases of unusual dislocation at the elbow-joint. "Med. Record," April 10, 1880.
3. **Rolke**, C. G.—Tracheotomy without the tube. "Med. Record," April 10, 1880.
4. **Bennett**, E. H.—Fracture of the upper third of the fibula from indirect violence. "Dublin Jour. of Med. Sci.," Feb. 2, 1880.
5. **Pooley**, J. H.—Congenital dislocation of the wrists. "Amer. Pract.," April, 1880.
6. **Peter.**—Sur la tuberculisation buccale. "Gaz. Méd. de Paris," Jan. 3, 10, Feb. 28, March 6, 20, 1880.
7. **Pozzi.**—Observations pour servir à l'étude des indications et du pronostic opératoires chez les aliénés, et en particulier chez les paralytiques généraux. "Gaz. Méd. de Paris," March 20, 1880.
8. **Bandolle.**—Cas de désarticulation de la cuisse pour un sarcome du fémur. [Soc. des Sci. Méd. de Lyon.] "Lyon Médicale," Feb. 29, 1880.
9. **Boegehold.**—Zwei Fälle von Strumitis metastatica. "Deutsche med. Woch.," March 20, 1880.
10. **Royero**, F.—Aneurisma traumático de la axilar derecha. Tentativa de ligadura de la subclavia por fuera de los escalenos. Hemorragias.—Tetania.—Autopsia, á las 17 horas de su fallecimiento. "Crón. Méd.-Quir. de la Habana," March, 1880.
11. **Chambers**, T.—A case of congenital inguino-ovarian hernia (double). Operation; recovery. "Trans. Obstet. Soc. London," vol. xxi, 1879.
12. **Duncan**, W. F.—Abscess of the antrum, with chronic discharge. Treatment and cure by the use of a new drainage-tube. "Med. Record," April 17, 1880.
13. **Hicks**, J. L.—Hydronephrosis of traumatic origin. "Med. Record," April 17, 1880.
14. **Hertzka**, E.—Ueber die Leukoplakia (Psoriasis) der Zungen- und Mundschleimhaut, und über den Einfluss einer karlsbader Kur auf dieselbe. "Deutsche med. Woch.," March 27, 1880.

15. Gosselin.—Ulcération tuberculeuse de l'anus. "Gaz. Méd. de Paris," March 27, 1880.
16. Fitch, W. H.—Excision of spina-bifida tumor—cure. "Chicago Med. Jour. and Exam.," April, 1880.
17. Bramwell, J. P.—On delirium potatorum traumaticum. "Edinb. Med. Jour.," April, 1880.
18. Jones, C. E.—A new concealed bistoury. Pamphlet (from the author).
19. Elsberg, L.—Microscopical study of papilloma of the larynx. "Arch. Laryngology," March, 1880.
20. Seiler, C.—Researches on the minute anatomy of the larynx, normal and pathological. "Arch. of Laryngology," March, 1880.
21. Masoti, D. A.—Notable caso de pneumocele espontáneo originado por un esfuerzo violento. "Revista de Med. y Cirug. Práct.," April 7, 1880.
22. Merchant, G.—Considérations, cliniques, anatomiques, expérimentales et thérapeutiques, sur les ruptures de l'artère méningée moyenne, principalement dans les fractures directes des parties latérales du crâne non compliquées de plaie. "Revue Mens. de Méd. et de Chir.," March and April, 1880.
23. Servier.—Observations d'une luxation du poignet. "Gaz. Hebdom.," March 26, and April 2, 1880.
24. Petit, L. H.—Histoire de la première résection de l'épaule pour carie, atribuée à tort à White, de Manchester. "Gaz. Hebdom.," March 5, 12, 26, and April 2, 1880.
25. Thomas, W.—On the treatment of empyema by resection of one or more ribs. Reprint from "Birmingham Med. Rev." [From the author.]
26. Marcy, H. O.—Aspiration of the knee-joint. "Trans. Amer. Med. Ass.," 1879.
27. Hornemann, J. W.—Ein Forgiftninger ved Carbolsyrens chirurgiske Anvendelse. "Bibliothek for Læger," Tiende Binds, andet Hefte, 1880.
28. Debaisieux, T.—Kyste hordéiforme du poignet—traitement par la méthode de Lister.—Guérison avec conservation de tous les mouvements. "Jour. des Sci. Méd. de Louvain," April, 1880.
29. Adams, A. W.—An almost fatal case from the use of the new anæsthetic, bromide of ethyl. "Med. Gaz.," May 1, 1880.
30. Reynier.—Recherches cliniques et expérimentales sur le bruit de moulin, symptôme d'épanchement intra- et extra-péricardique dans les traumatismes de la poitrine. "Arch. Gén. de Méd.," April, May, 1880.
31. Poore, G. V.—On the physical examination of the mouth and throat. "Lancet," April 10, May 22, 1880.
32. Baker, M.—On the removal of the tongue by median division or splitting. "Lancet," April 10, 24, 1880.
33. Barlow.—Disease of larynx in congenital syphilis. [Path. Soc., London.] "Lancet," April 10, 1880.
34. Thudichum, J. L. W.—On polypus and other morbid growths in the nose; their radical treatment by the electro-caustic method, and their connection with asthma. "Lancet," April 17, 1880.
35. Savage, T.—Hydronephrosis; nephrotomy; recovery. "Lancet," April 17, 1880.
36. Fayrer, Sir J.—Liver abscess and antiseptic paracentesis. "Lancet," April 24, 1880.
37. Thornton, W. P.—The treatment of ozæna. "Brit. Med. Jour.," March 27, 1880.

38. Roger.—Essai critique sur le traitement des kystes hydatiques du foie. "Bulletin Gén. de Thérapeutique," March 30, April 15, 1880.
39. Lupo, P.—L'enterotomia nei casi d'ano anormale. "Giorn. Internaz. delle Sci. Med.," fasc. 1, 1880.
40. Petronio, F.—Contribuzione patologico-clinica sulle ferite contuse semplici del capo. "Giorn. Internaz. delle Sci. Med.," fasc. 1, 1880.
41. Labus, C.—Tumore fibroso-cistoideo della vera corda vocale destra; esportazione per via laringoscopica—Guarigione. "Giorn. Internaz. delle Sci. Med.," fasc. 1, 1880.
42. Massei, F.—Sulla importanza e sulle indicazioni della cura locale nelle malattie respiratorie. "Giorn. Internaz. delle Sci. Med.," fasc. 2, 1880.
43. Bocci.—Metodo facile di praticare la fistola gastrica. "Giorn. Internaz. delle Sci. Med.," fasc. 1, 1880.
44. Haslund, A.—Laryngologiske Meddelelser. "Hosp.-Tidende," April 21, 1880.
45. Holmer.—Om Behandlingen af Carcinoma Recti ved Exstirpation. "Hosp.-Tidende," April 14, 1880.
46. Corradi.—Sull' invaginamento intestinale cronico. "Lo Sperimentale," Jan., 1880.
47. Trevisanello.—Storia di un tetano. Il tetano è una malattia d'infezione. "Lo Sperimentale," Feb., 1880.
48. Pinner.—Ein Fall von Lymphangioma cystoides der Brust. "Centralbl. f. Chir.," No. 12, 1880.
49. König.—Heilung einer jauchigen Osteomyelitis durch Amputation des Oberschenkels und desinficirende Ausräumung der Markhöhle. "Centralbl. f. Chir.," No. 14, 1880.
50. Kraske.—Die Behandlung progredienter septischer Phlegmonen mit multiplen Incisionen und Skarifikationen. "Centralbl. f. Chir.," No. 17, 1880.
51. Schüller, M. — Zur antiseptischen Behandlung des Carbunkels. "Deutsche med. Woch.," April 24, 1880.
52. Mathewson, A.—The anatomy and surgery of the Eustachian tube. "Annals of Anat. and Surg. Soc.," March, 1880.
53. Mason, L. D.—An improved method of treating depressed fractures of the nasal bones. "Annals of Anat. and Surg. Soc.," March, 1880.
54. Kelsey, C. B.—On division of the sphincter ani muscle as a therapeutic measure. "N. Y. Med. Jour.," June, 1880.
55. Hansen, J.—Rheumatismus articulorum acutus, Endocarditis, Embolie der arteria poplitæa rechtsseitig.—Amputation des Oberschenkels.—14 Tage später Embolie der poplitæa linksseitig.—Tod. "Memorabilien," April, 1880.
56. Rothe, C. G.—Tracheotomie ohne Canüle. "Memorabilien," April 26, 1880.
57. Ariza, D. R.—Dos casos de pólipos laríngeos extirpados por el método de las esponjas de Voltolini combinado con la avulsion. "Revista de Med. y Cirug. Práct.," May 7, 1880,
58. Gross, S. W.—The diagnosis of tumors of the mammary gland. "N. Y. Med. Jour.," June, 1880.
59. Tillaux.—Epithélioma du larynx avec dégénérescence ganglionnaire. "Progr. Méd.," May 15, 1880.
60. Verneuil.—Corps étranger du rectum — laparotomie — guérison. "Progr. Méd.," May 15, 1880.
61. Lannelongue.—L'ostéomyélite. "Tribune Méd.," May 16, 1880.
62. Gosselin.—Onyxis ulcéreuse des deux gros orteils; ablation de l'ongle. "Concours Méd.," May 15, 1880.

63. Pilcher, L. S.—Further contribution to the study of fractures of the inferior extremity of the radius. Differentiation of longitudinal and transverse fractures, and the causes which produce them. "Proc. of Med. Soc. of County of Kings," June, 1880.
64. Pize, L.—Du traitement des anévrysmes par la compression digitale. "Bull. Gén. de Thérapeutique," April 30, May 15, 30, 1880.
65. Stallard, J. H.—Abdominal section for purposes of diagnosis. "San Francisco Western Lancet," May, 1880.
66. Tonoli, S.—Aneurisma ampollare estrapericardico del lato destro dell' aorta ascendente curato coll' ago elettro-puntura. "Gaz. Med. Ital. Prov. Venete," May 8, 1880.
67. Seaton, L. L.—Restoration after the hand is completely separated from the arm. "N. Carolina Med. Jour.," May, 1880.
68. Dowsley, D. H.—Imperforate rectum—operation. "Canada Lancet," June 1, 1880.
69. Howard, B. J.—Observations on the upper air-passages in the anæsthetic state. "Lancet," May 22, 1880.
70. Pick.—Case of strangulated vermiform appendix; operation; death; remarks. "Lancet," May 22, 1880.
71. Bennett, E. H.—Remarks on Colles's fracture and the fractures of the same part of the lower end of the radius. "Brit. Med. Jour.," May 22, 1880.
72. Handford, H.—Case of rupture of the heart from external violence, without penetrating wound. "Brit. Med. Jour.," May 22, 1880.
73. Girard.—Zur Anwendung der Narkose bei Untersuchung des Œsophagus. "Centralbl. f. Chir.," No. 21, 1880.
74. Esmarch.—Ueber ganz blutlose Operationen. "Beilage zum Centralbl. f. Chir.," No. 20, 1880.
75. Urlichs.—Ueber die Elasticitätsverhältnisse der Arterien bei verticaler Elevation. "Beilage zum Centralbl. f. Chir.," No. 20, 1880.
76. Czerny.—Zur Exstirpation retroperitonealer Geschwülste. "Beilage zum Centralbl. f. Chir.," No. 20, 1880.
77. Bornhaupt.—Ueber den Mechanismus der Schussfrakturen der grossen Röhrenknochen, mit Demonstrationen. "Beilage zum Centralbl. f. Chir.," No. 20, 1880.
78. Kocher.—Zur Behandlung der Patellarfraktur. "Centralbl. f. Chir.," No. 20, 1880.
79. Krishaber, M.—L'ignipuncture appliquée aux granulations du pharynx et du larynx. "Ann. des Mal. de l'Oreille, du Larynx," etc., May, 1880.
80. Terrier.—Rétention de la salive parotidienne par suite d'un ulcération de l'orifice du canal de Sténon. [Soc. de Chirurg., Paris.] "Gaz. Méd. de Paris," May 22, 1880.
81. Terrier.—Hernie inguinale étranglée. [Soc. de Chirurg., Paris.] "Progr. Méd.," May 22, 1880.
82. Saucerotte, T.—Note sur l'emploi de la congelation artificielle en chirurgie. "Gaz. Hebdom.," May 28, 1880.
83. ———.—Treatment of fractures of the femur. [Med.-Chir. Soc. of Louisville.] "Med. Herald," June, 1880.

2. Dr. Mason reports four *rare dislocations at the elbow-joint*—two of the radius and ulna outward; one of the ulna backward, and the radius forward and outward; and one of the radius and ulna backward, with secondary dislocation of the radius backward and outward, occurring shortly after the reduction of both bones.

3. Dr. Rolke's *instrument for keeping the tracheal incision open after tracheotomy* is shaped like an ordinary thumb-forceps, curved slightly like

the ordinary tracheotomy-tube, and provided at the ends with knobs, which help to retain it in position. It is supposed to obviate the dangers of closure of the tube by pieces of membrane. It is easily introduced, and permits the free application of medicines to the trachea.

4. Dr. Bennett believes that *fracture of the upper third of the fibula from indirect violence* is a more common accident than is usually supposed, and generally passes for a sprained ankle. He describes one case of his own, and gives drawings of various others from the Trinity College Museum of Pathology.

11. This case of *double congenital inguino-ovarian hernia* occurred in an hermaphrodite. The woman at the age of twenty-three was well developed except as to the genitals, the external organs being small, and the internal absent. She had never menstruated. The lumps in the groins caused her much pain and uneasiness, and, after a thorough examination of the pelvis under chloroform, they were removed as useless. The literature of this operation in cases of ovarian hernia is given from the time of Pott, who, by the way, is robbed of the honor of being the first operator, though that of being the first recorder of the operation of another is still accorded him.

15. *Tubercular ulceration of the anus* is much less frequent and has been much less studied than tubercular ulceration of the throat, though the two affections are identical. The best studies of the disease are by Martineau and Féréol (Soc. Méd. Hôp., 1874); Spillmann (De la tuberculisation du tube digestif. "Thèse d'agrégation en médecine," 1878); Liouville ("Bull. Soc. Anat.," 1874); Péan et Malassez (Étude clinique sur les ulcérations anales, Paris, 1871); and Mollière (Traité des maladies du rectum et de l'anus, Paris, 1877). In the case described in this article the woman also suffered from pulmonary disease, and the differential diagnosis lay between ulceration due to tubercle and simple ulceration in a tuberculous person—two very different conditions—the latter being a lesion of rapid progress, which causes gangrene of the tissues, constantly increases in size, and is surrounded by an inflammatory areola. The former is a lesion difficult to cure, seldom taking on true reparative action, forming granulations, or secreting pus. If it can be induced to cicatrize, the cicatrix always tends to ulcerate easily, and the passage of fæces is a constant obstacle to cure. The chief indication to be met is the relief of pain, and this may be accomplished by local anodynes, opium, and lumbar colotomy, should the suffering and the general condition of the patient justify the procedure.

16. It is hardly necessary to say that in this case the *excision of a spina bifida* was not premeditated. It was situated in the lumbar region, measured two inches and a half by one and a half, and presented none of the usual signs of the disease. The excision, however, was complete, and after the loss of much cerebro-spinal fluid the wound gradually cicatrized, and the child was cured.

17. Dr. Bramwell recommends the continuance of the daily supply of liquor as a means of avoiding *traumatic delirium tremens.* The complication is always a serious one, and in one half of Billroth's cases was a fatal one; and yet the equilibrium of a drunkard's system is far more easily disturbed than that of a sober man, and alarming phenomena often present themselves which do not mean all they appear to do, and which often terminate suddenly in a way altogether peculiar, giving place to healthy reparative action. For this reason, it is not well to despair too quickly, or to resort to amputation, for example, too hastily. The treatment should consist in immovable plaster dressings when applicable, free purgation, the most nourishing food, and a moderate supply of liquor.

18. This new and ingenious *concealed bistoury* is intended to overcome the difficulty every practitioner has met with in efforts to lance a suppurating tonsil or a circum-tonsillar or retro-pharyngeal abscess in cases where the mouth can not be opened to any extent, and where, as in children or hysterical women, the use of a bistoury guarded by a piece of muslin is attended with more or less danger. In general appearance the instrument resembles the well-known concealed bistoury for incising the meatus urinarius, but in this case the blade is made to project from the end instead of the side, at any desired moment, and to an extent regulated beforehand by a screw. The instrument is made by Reynders & Co., of New York, and fills a want which has long been felt.

21. This case of *spontaneous pneumonocele* is remarkable for its great rarity. It occurred suddenly, as a result of violent coughing, in a previously healthy man, and was situated at the outer border of the pectoralis major muscle in the fifth intercostal space, forming a tumor of the size of a hen's egg. The diagnosis was easily made by means of the stethoscope and the feeling of crepitation, and the hernia reduced and retained by a graduated compress. With perfect rest and proper treatment to prevent a recurrence of the accident, the patient made a good recovery.

22. In this article on *rupture of the middle meningeal artery, especially in fractures of the lateral portions of the skull uncomplicated by wounds*, the whole question is considered from various standpoints, clinical, anatomical, experimental, and therapeutical; and after a careful study the following general conclusions are reached: The greater number of intracranial effusions following fractures of the skull are due to rupture of either the trunk or branches of the middle meningeal artery. In the majority of cases a direct, localized, and severe injury is the cause of the rupture, as a fall from a height or a severe blow on the temporo-parietal region. The diagnosis of rupture of this artery, in direct fractures of the lateral portion of the skull without wound, is possible when the associated local and general phenomena are considered together. The local signs are profuse œdema and puffiness in the temporo-parietal region, localized pain, ecchymosis over the zygomatic and mastoid processes, trismus, and occasionally dilatation of the pupil on the side of the effusion. The general symptoms are coma, stertor, signs of cerebral compression and irritation (rarely hemiplegia) which can not be localized. These symptoms have no value unless associated; then they are almost pathognomonic. Crossed hemiplegia is a sign of great importance. The rupture of the artery may be due to either one of two causes, direct laceration by a splinter of bone, or tearing, due to division of the little canal (sometimes completely osseous) which contains the anterior branch of the artery after its division. From these two varieties, and by reason of the anatomical conditions, the author believes it possible to differentiate in most cases between effusions of variable size, shape, location, and consistence. In the first variety, where the rupture is due to direct laceration by a splinter of bone, the effusion is outside the dura mater, between it and the bone. The signs of compression are severe and come on rapidly. The effusion is always of the same type, regulated by the anatomical conditions—the separable zone of dura mater. This separable zone, experimentally determined, and pathologically observed and verified, extends from before backward from the posterior edge of the lesser wings of the sphenoid to within two or three centimetres of the internal occipital protuberance, and measures about thirteen centimetres in length. From above downward it commences a few centimetres from the sagittal suture, and never extends lower than an horizontal line which, starting from the posterior sharp border of the lesser wings of the sphenoid, touches the superior border of the petrous portion of the temporal, and passes above the horizontal portion of the lateral sinus; about twelve centimetres in height. Again, in this first variety, the ecchymosis and temporo-parietal infiltration may be produced in two ways: (a) by the filtration of blood through the fragments of splintered bone and torn aponeurosis, in which case they have a tendency to augment (rare); and (b) the ecchymosis, sanguineous infiltration, and fracture may all be produced by the same direct traumatism, the contusion of the skull. In this case the ecchymosis remains limited and has no tendency to increase. In the second variety (division of the bony canal or of the little groove by the tract of a fracture radiating from the vault to the base) the effusion, as a result of the concomitant rupture of the dura mater, will be beneath that membrane and in the arachnoid, and variable in size. The signs of cerebral compression, also the stertor, may be absent; the diagnosis is not always possible, and the prognosis is of a less rapidly fatal issue; the trunk or the anterior branch of the artery will always be the point from which the hæmorrhage comes.

During life, the anatomical diagnosis, that is to say, the determination of the branch of the artery from which the hæmorrhage comes, rests only on probabilities, and is a matter of secondary importance. However, the point which has borne the injury, the maximum point of pain, the tendency of the ecchymosis to invade the anterior (temporo-zygomatic) or posterior (mastoid) portion of the inferior facial region, associated with the known relations of the branches of the middle meningeal artery with the vault of the cranium, may, in some cases, permit the fixing of the source of the hæmorrhage upon the anterior or posterior branch. In case of wounds of the scalp, the diagnosis may be greatly facilitated. *Post mortem*, the same diagnosis often presents difficulties, even with the pieces in the hands. The arterial rupture may vary, in fact, from the most conspicuous wound of one or several branches to the least appreciable prick. In some cases it produces a hæmorrhage *en nappe*, which seems to have its origin in the vessels which pass from the dura mater to the bones of the skull.

In certain cases of fracture with wound, and in children, by reason of the adherence of the dura mater to the bones of the skull, of the tendency of the blood to escape to the exterior and to constitute an extra-cranial hæmorrhage, by reason, also, of the position of the middle meningeal artery, which lies superficially (dura mater non-separable), and of its complete section, surgical interference may have some chance of success. (Trephine, ligature.) With adults and old people the trephine is useless in most cases; *first*, because of the effusion (several centimetres in diameter) which forms in the interior of the skull, and of the impossibility, not of reaching so large a surface, but of removing, without septicæmic complications, and especially without meningo-encephalic irritation, voluminous clots with a tendency to rapid fibrillary organization. The trephine should be used several times in succession. *Secondly*, the clot is, moreover, the best hæmostatic, which being removed by the curette or by washing, leaves us in presence of a hæmorrhage, whose point of departure is often difficult to discover. *Thirdly*, if the surgeon is able to find the source of the hæmorrhage, he is put to the necessity of operating on an artery often driven back with the separated dura mater to a distance of three, four, or five centimetres from the cranial wall, and which escapes all the customary hæmostatics. There is an almost constant coexistence of cerebral contusion to the third degree at a point diametrically opposite to the application of the fracturing force (lesion by *contre-coup*, so called), and all these considerations seem to contraindicate the operation of trephining.

28. Dr. Debaisieux records a case of *treatment of ganglion of the wrist by Lister's method*, in which he obtained a perfectly satisfactory result. After referring to the well-known dangers of operative interference in

these cases, and quoting from Dupuytren and Gosselin to show how unsatisfactory was the treatment in their hands, he quotes a letter from Mr. Lister to himself, in which the antiseptic method is thus described, as followed out by its inventor: "In one such case I opened the tumor above the wrist and in the palm, pressed out the free granules, and put in a drain, following in everything the precepts of the antiseptic method. More precisely, this is the method which I consider best. It is necessary, first, to open the sac above the wrist; if the sheath of the deep flexor is alone implicated, the tendons of the superficial flexor must be drawn out of the way to reach this. As soon as the opening is made, introduce a solid and slightly curved probe, pass the probe under the annular ligament, and force it through the palmar aponeurosis so that its extremity shall be under the skin; then make an incision in the palm on to the end of the stylet, introduce a dressing forceps through this incision until it is well under the aponeurosis, and enlarge the opening in the latter by separating the blades of the forceps. In this way a wound of the palmar arch is avoided; still leaving the stylet in place, the rice grains are forced out of the two openings. A horse-hair drain, previously soaked in carbolic acid, is then introduced by drawing out the probe in such a way that one end projects from the wound in the palm and the other from the wound above the wrist. The dressing is made with the antiseptic gauze, and the hand rested on a splint, Later, when the discharge is decreased, the size of the drain is also reduced by drawing out a few of the hairs from time to time, but the last hairs should not be removed till the final cessation of the discharge. The method which consists in opening only one portion of the synovial pouch does not seem to me desirable, because it does not provide a sufficient vent for the corpuscles. The drain of horse-hair is much preferable to the ordinary rubber one, because it is incompressible. I have never tried injections of the tincture of iodine. It is hardly necessary to add how important it is that all parts of the operation should be executed after the antiseptic method."

12. Mr. Morrant Baker gives nine cases of *removal of the tongue by median division, or splitting*, an operation which he strongly recommends as much less difficult than those usually employed, and applicable to some cases in which at first sight all operative interference would seem to be contraindicated; as, for instance, cases where the lymphatic glands are too extensively diseased to admit of removal. In such cases the operation is only palliative, but the removal of the growth does away with all the most distressing symptoms. The operation is thus described: After the introduction of a suitable gag and the removal of any sharp or jagged teeth which might be in the operator's way, two threads are passed through the tongue about half an inch from the median line, on each side, and one inch from the tip. The tongue being drawn forward and upward, the frænum and, as far as may seem necessary, some of the muscular attachments of the tongue to the lower jaw in front are snipped through with strong, rather curved, blunt-pointed scissors, and the scissors are then run along the floor of the mouth at the side, beneath the mucous membrane, as far back as may seem requisite, keeping close to the lower jaw. The operator now with his forefinger clears the tongue in front and at the sides, and, drawing it well forward again, and giving one thread to his assistant, while he holds the other himself, cuts steadily along the middle line of the tongue from the tip backward, and farthest along the mucous membrane. On the withdrawal of the knife the finger is again introduced, and it will be found quite easy to complete with it the median division of the tongue by a little tearing or splitting between the two halves. The only part which can not be thus torn is the mucous membrane of the dorsum; hence the advice just given to divide this with the knife as far as may seem necessary to get beyond the disease. The écraseur is now slipped over the diseased half, the assistant turning the screw while the operator keeps the loop as far behind the disease as possible. This is, of course, one of the most important parts of the operation; any want of care at this stage being shown afterward by the narrow margin of healthy tissue, or by none at all, left attached to the diseased mass. The insertion of curved needles behind the disease, in order to insure the division of healthy tissue by the écraseur, is often advisable; but, for the reasons previously given, must not be considered a sufficient safeguard in the absence of free separation of the tongue's attachments in front and at the sides. In all cases in which, from the extent of the disease backward, or in the floor of the mouth, any difficulty is anticipated in placing the loop of the écraseur well beyond the tumor, the cheek may be divided with advantage by an incision extending from the front border of the masseter to the angle of the mouth. The median division, combined with division of the frænum, and as much of the muscular structures which tether the tongue in front as may be safely divided, is an excellent preliminary step, not only in operations for removal of half, but of the whole tongue. The two halves are more completely under control than the whole organ; and by working simultaneously with two écraseurs no time will be lost.

33. The first case of *disease of the larynx in congenital syphilis* was shown by Dr. Barlow. The specimen was removed from a child eleven months old. At the age of five months the voice was noticed to be rather weak and hoarse, especially when she cried; there was also a hoarse cough, but no sign of laryngeal dyspnœa. These symptoms varied a good deal at times, passing away entirely and relapsing, probably from catarrh. The child eventually died suddenly after three or four days' illness, apparently connected with the larynx. At the *post-mortem* examination there was found to be some œdema of the aryteno-epiglottidean folds, very slight erosion of the mucous membrane above and below the vocal cords and in the ventricles, and some very scanty, thin, and closely-adherent laminæ of false membrane. The cause of death seemed to be the supervention of membranous inflammation upon a chronic laryngitis. He was induced to bring the case forward because Dr. Sémon had recently stated that disease of the larynx in congenital syphilis was very rare. In his experience he had found it of quite common occurrence that syphilitic children, when first brought for treatment with snuffles, thrush, and so on, had also a hoarse, weak voice; but, as this rapidly improved under mercurial treatment, little attention was paid to it. In several cases he had noticed that after apparent recovery any fresh catarrh at once affected the larynx, as if a sub-acute condition were left, which was prone to take on acute change. His colleague, Dr. Warner, had shown him a case of true warty growths in a syphilitic child. Another specimen was shown by Dr. Sturge, that of a boy two years and a half old, who came to him suffering from intense inspiratory and expiratory dyspnœa, stridor, and cyanosis, the voice being reduced to a harsh whisper. He had evident signs of congenital syphilis. The boy improved under mercurial inunctions, but died suddenly. The mucous membrane of the left half of the larynx was much swollen quite down to the rima glottidis; there had been extensive ulceration, which had destroyed both the true and the false vocal cords, particularly on the left side, and by cicatrization had left symmetrical deep fissures and incipient stenosis of the upper part of the trachea. Dr. Lees confirmed Dr. Barlow's statement, as to the frequency of disease of the larynx in inherited syphilis. He remembered three patients in whom the affection was evidently severe; in one he had been able to see that the epiglottis was thickened and ulcerated; another had been admitted to the hospital three or four times with urgent dyspnœa, for which it was feared tracheotomy would be necessary. This child's sister suffered in the same way. Dr. Sémon wished to state that he had been misunderstood. He had only stated that deeper lesions were rare; superficial catarrh was, no doubt, common enough. Not only were the records of deep lesions very few, but it was a noteworthy fact that, in cases of congenital syphilis with destruction of the nose or palate, only very few cases of destruction of the larynx had ever been found. He himself had never seen any. Dr. Barlow mentioned that Dr. Bumstead had observed six cases of very deep ulceration. Dr. Mackenzie stated that in all he had collected seventy-eight or eighty cases of marked congenital syphilitic disease of the larynx which he hoped shortly to publish. He thought the affection as common in congenital as in acquired syphilis.

34. This is a strong argument by Dr. Thudichum in favor of *the electro-caustic method of removing nasal polypi and other growths in the nose.* The immediate objections to the use of the forceps are that it causes great pain and completely obstructs the view; the impossibility of opening the blades sufficiently to grasp more than a thin end; bruising of mucous membrane over the ascending ramus of the superior maxilla, the turbinated bones, and the septum; bleeding, secondary ulceration, and gangrenous destruction of ill-treated parts; and, finally, the insufficiency of the result. If a passage is made, it frequently lasts only a few days, and soon the nose is closed again. Among the permanent evil results of forceps operations he enumerates complete or partial closure of the nostril; membranous adhesions between the turbinated bones and the septum; fracture of the cartilaginous or bony septum, with gangrene and perforation. The author claims priority in the use of the electro-caustic method for *polypi* over its inventor Middeldorpf, and has much to say in its favor. It is greatly superior in results; it causes next to no pain, and the tools are so thin that even when two or three are simultaneously used there is still ample room for illumination; freedom to the operator to shift his position or that of the patient; bleeding is limited to a minimum; and the results as to restoration of freedom of respiration are the most perfect possible. The method also does away with all necessity for operating through the mouth or posterior nares, polypi situated far back being drawn to the anterior nares by gentle traction by fine hooks. By this method Dr. Thudichum has removed excrescences of the nose other than polypi, such as fibrous, adenoid, osseous, and osteo-cartilaginous growths. Atresia is overcome by proceeding with the electro-caustic wire from without inward. Ablation of the turbinated bone is effected in two stages; one is the cutting away of the cavernous tissue with the white-hot iron; the other, the removal of the bone with nippers, or chisel and hammer. In most cases the removal of a short piece, at most an inch and a half in length, suffices to open the canal. Adenoid tumors of the pharynx, epithelioma of the nasal cavity, concealed abscess, abscess complicated with small aneurism, and the various forms of fibrous tumors, are all operated on through the anterior nares by this means. In speaking of the complications of nose disease, the author states that in about every fifth case the patient is troubled more or less with asthma. This may sometimes be relieved by the use of chloride of ammonium or iodide of potassium, but the latter must not be used where there is a complicating bronchitis. Here the most useful remedy is the inhalation of the vapors of opium, belladonna, Indian hemp, hemlock, hyoscyamus, or stramonium. The asthma complicating nasal polypus may be inherited without the polypus, and vice versa.

35. Dr. Savage reports a *successful case of nephrotomy.* The patient, a woman aged forty-six years, had a tumor of about the size of the fœtal head occupying the right lumbar and umbilical regions, which was clearly cystic and seemed to come from the right kidney. The operation was performed by a median incision extending from two inches above to two inches below the umbilicus; the tumor was tapped, giving exit to a clear, watery fluid, which was neither examined carefully nor exactly measured. When the hand was passed down to the base, the attachment was found to be thicker than one's wrist, and it appeared impossible to tie either the artery and vein or the mass in bulk at so great a distance, deep in the abdomen, and close to the spine. The wall of the cyst was made up on the outer and front part of true renal tissue, that is, the dilated pelvis of the kidney, in which were seen the enlarged calyces and papillæ. The other part of the cyst wall was made up of two portions, an outer one, being a continuation of the capsule of the kidney; and an inner one, apparently derived from the lining of the enlarged pelvis. The hand was passed into the cyst in search of a calculus in the ureter, but none was found, and it was then sponged out with carbolic acid. A wire clamp was applied about the middle of the collapsed cyst, and about one half of the distal portion, i. e., about one fourth of the whole mass of the cyst, was cut away, leaving one fourth still attached to the distal side of the clamp. This large mass was left for security against slipping. Perchloride of iron was applied to it, and carbolized lint used as a dressing. About the fourth day afterward there was noticed a slight welling up of clear fluid from the center of the stump, which appeared likely to end in a permanent urinary fistula. The clamp was cut away on the twenty-third day, and the sloughing stump gradually cleaned so that the patient left the hospital forty-five days after the operation. Two weeks later the wound had cicatrized with the exception of an area of about the size of a threepenny piece, at the bottom of which was a sinus into which a probe passed for two inches directly backward. There was a daily discharge of clear fluid about a teaspoonful in quantity.

51. For the past three years Dr. Schüller has employed the following *antiseptic treatment for carbuncles*, which he recommends, from its simplicity and safety, for private practice. The carbuncle is incised crosswise, and its contents thoroughly scraped out with a sharp spoon at the same time that the connective-tissue septa are broken down either with the spoon or with a scalpel, and the hard infiltrated spots removed. By this means a relatively clean, bleeding wound is obtained, which is washed out with some antiseptic solution, such as carbolic acid; one or more drainage-tubes are introduced, and the wound is covered with antiseptic gauze. The course of the disease after these measures is extraordinarily simple and speedy. Generally healing follows, with very moderate discharge and slight fever. The drainage-tubes are removed with the first or second change in bandages, which are renewed every second or third day, according to circumstances. In many cases three or four changes suffice. In carbuncles of the face the bandage is difficult to apply, and inconvenient to the patient; naturally also it must be renewed when fever or new infiltrations show themselves.

60. The following rare case is worthy of a place with the many instances of *foreign bodies in the rectum* which are now on record: A man, aged forty-five years, had the habit of tamponing his rectum to overcome an incontinence of fæces which had resulted from two previous attacks of dysentery. For this purpose he used large bodies, taking the precaution to tie to them a piece of cord, the ends of which hung outside. But one day he had no cord, and a cylindrical piece of wood ten centimetres long and about eight centimetres in diameter escaped into the upper part of the rectum, and could neither be forced down nor reached with the finger. All the efforts which were immediately made by a physician of the place only forced the body further from the anus. In this condition the patient entered the service of M. Verneuil. There were few signs of retention, but the finger could not be made to reach the foreign body; only with the hand on the abdomen could it be felt in the left iliac fossa. It was so high that linear proctotomy (free division of the anus) could give no assistance, and therefore laparotomy was decided upon. The plan of operation was the following: through a small abdominal incision to search for the sigmoid flexure in which the body was probably lodged. To draw the sigmoid flexure outward, if healthy to incise it, remove the body, sew up the gut, and replace it in the abdomen; if, on the contrary, it was diseased, to stitch it to the abdominal wall and make an artificial anus. But the foreign body was fixed in the upper part of the rectum and immovable; it lay with its long axis from behind forward, and resembled a huge apophysis. By reason of the immobility of the rectum, the former plan of operation had to be abandoned. Fortunately it was possible to dislodge the body from its fixed position, and M. Lucas Championnière, who at that moment practiced the rectal touch, received it on his finger. While M. Polaillon fixed the body with his hand, M. Verneuil endeavored to seize it with the forceps of Museux, or to fix it with a gimlet, but without success. Linear proctotomy was then performed, and M. Verneuil succeeded in moving the foreign body with one of the blades of a lithotomy forceps, bringing it down and seizing it with a strong forceps. The instrument slipped many times on the bark of the wild-cherry wood, and it was only after many long and painful attempts, practiced with a very defective stock of tools, that the foreign body was finally withdrawn. It was followed by very fetid fecal matter and a little blood. The results of the operation, thanks to the precautions taken during the manœuvres and the treatment subsequently employed, surpassed all expectations. The abdominal wound healed by first intention under Lister's dressing, and a soft rubber catheter, kept permanently in the rectum, through which chloral was injected every two hours, prevented any complications in this part. M. Verneuil recommends this method of treating rectal wounds where Lister's dressing is impossible.

65. Dr. Stallard reports a bold operation of *abdominal section for purposes of diagnosis*, which is worthy of more than a passing notice, as showing the tendency of the abdominal surgery of the present day. The patient, a man aged forty-one years, had a tumor of doubtful nature in the left hypochondriac region, which was growing rapidly, had already impaired his health, and from which nothing but a fatal termination was to be expected unless surgical relief could be given. The cancerous cachexia was not marked, and, although weak, the man was in fair condition for operation. The exact definition of the tumor and its limited mobility suggested the absence of adhesions to the viscera and the possibility of enucleating it or tying the pedicle. It was determined to make an exploratory incision under antiseptic precautions. This was accordingly done, but the growth was unfortunately found attached deeply to the root of the mesentery in front of the great vessels, and it was decided that an attempt at removal would prove immediately fatal. The wound was therefore carefully closed, and dressed after Lister's method. At no time after the operation did the temperature exceed 100° F., and on the thirtieth day the man was fully as well as before the interference.

QUARTERLY REPORT ON DISEASES OF CHILDREN.*

No. II.

1. Roe, J. O.—The relation of membranous croup to diphtheria. "Buffalo Med. and Surg. Jour.," March, 1880.
2. ———.—Des convulsions chez les enfants et de leur traitement. "Concours Méd.," March 6, 1880.
3. Heyntschak.—Ein Fall von Vaccination im Incubationsstadium der Morbillen und Abimpfung in Prodromalstadium derselben. "Arch. für Kinderheilk., I B., 2 H., 1880.
4. Uffelmann, J.—Ueber die Flaschenbouillon, ihren diätetischen Werth und ihre Verwendung in Krankheiten der Kinder. "Arch. für Kinderheilk.," I B., 3 H., 1880.
5. Seeligmüller, A.—Lähmung nach Spinalmeningitis im Kindesalter. "Arch. für Kinderheilk.," I B., 4 H., 1880.
6. Winternitz, W.—Ein Beitrag zur Lehre über das Cheyne-Stokes'sche Respirationsphänomen bei Kindern. "Arch. für Kinderheilk.," I B., 4 H., 1880.
7. Weiss, B.—Casuistische Mittheilungen über die Anwendung der Massage bei Laryngitis catarrhalis und crouposa. "Arch. für Kinderheilk.," I B., 5 u. 6 H., 1880.
8. Powell, R. W.—Cases of pertussis treated by carbolic acid. "Canada Med. and Surg. Jour.," March, 1880.
9. Uffelmann, J.—Zur Aetiologie der Cholera infantum, mit besonderer Berücksichtigkeit des Ergebnisses der Johnston'schen Untersuchungen in der Stadt Leicester. "Deutsche med. Wochenschr.," Nos. 10, 11, 12, and 13, 1880.
10. Buchanan, A.—Whooping-cough, and what it teaches us of the sounds of the heart. "Glasgow Med. Jour.," April, 1880.
11. Keating, J. M.—Hot baths in the treatment of the febrile affections of infancy. "Phila. Med. Times," April 10, 1880.
12. Smith, J. L.—Pleuritis in children. "Am. Jour. Obstet.," April, 1880.
13. Gibney, V. P.—Caries of the ankle in children. The results of expectant treatment from a study of thirty cases. "Am. Jour. Obstet.," April, 1880.
14. Blachez.—L'allaitement artificiel des enfants nouveau-nés. "Gaz. Hebdom.," April 2, 1880.
15. Harkin, A.—Du lait au point de vue de l'alimentation des enfants du premier âge. "Concours Méd.," April 3, 1880.
16. Simmons, D. B.—Nocturnal incontinence of urine in boys. "Am. Jour. Obstet.," April, 1880.
17. Parker, R. W.—Short papers on some common diseases in young children. "Obstet. Jour. Great Br. and Ire.," April, 1880.
18. Cheadle.—Cases of chronic tetanoid convulsion of childhood—successful treatment by calabar bean. "Med. Times and Gaz.," March 13, 20, 1880.
19. Corley, A. H.—Tracheotomy in croup in Ireland. "Brit. Med. Jour.," April 10, 1880.
20. Parker, R. W.—Tracheotomy in croup. "Brit. Med. Jour.," April, 10, 1880.
21. Thomson, W.—Tracheotomy in croup. "Brit. Med. Jour.," April 10, 1880.

---

* Dr. Lee being absent from the country, this report has been prepared by one of the other members of the staff.—Ed. "N. Y. Med. Jour."

22. Buchanan, G.—Tracheotomy in croup and diphtheria. "Brit. Med. Jour.," April 10, 1880.

23. Goodheart, J. F.—Sporadic cretinism and myxœdema. "Med. Times and Gaz.," May 1, 1880.

24. Alsberg, A.—Beiträge zur Kenntniss der Masern. "Arch. für Kinderheilk," I, 7, 8, 1880.

25. Bruce, R.—Case of resuscitation of new-born infant. "Edinburgh Med. Jour.," May, 1880.

26. Boucheron.—Sur un mode de traitement de certaines surdités et surdi-mutités infantiles. "Gaz. Méd. de Paris," May 8, 1880.

27. Cripps.—Imperforate rectum—vomiting of fæces—death from operation at age of one month. "Lancet," May 15, 1880.

28. Booth, J. M.—Toleration of opium in an infant. "Brit. Med. Jour.," May 15, 1880.

29. Smith, J. L.—On the "summer complaint" of infants. "Med. News and Abs.," June, 1880.

30. ———.—Report on measles, by the committee on hygiene of the Medical Society of the County of Kings, Brooklyn, N. Y. "Proc. Med. Soc., County of Kings," June, 1880.

31. Bigelow, H. R.—Summer hygiene of infants. "Med. and Surg. Reporter," May 29, 1880.

32. Simon, J.—Sur la claudication. "Gaz. Méd. de Paris," May 8, 15, 1880.

33. Owen, E.—Abstract of lectures on certain practical points in connection with the surgery of childhood. "Brit. Med. Jour.," Feb. 21, 28, March 6, 1880.

34. Raymond, F. H.—Measles not a trivial disease. "Proc. Med. Soc., County of Kings," May, 1880.

35. Motte.—Anus contre nature consécutif à la ligature du cordon.—Double invagination. "Progr. Méd.," March 20, 1880.

10. Under the title of *whooping-cough, and what it teaches us of the sounds of the heart*, Dr. Buchanan gives us, first, a very careful clinical study of the disease, and, secondly, some original views of the causation of the normal heart-sounds, to which he has been led by a study of the heart's action in this disease. He distinguishes four different ways in which the malady may terminate fatally: (1) from violent and protracted spasm of the expiratory muscles, causing immediate asphyxia; (2) from violent fever, without any corresponding local affection; (3) from adynamia by the long continuance of a painful and exhausting disease; and (4) from the disorganization of tissue in the lungs or brain, occurring as a mechanical effect of the violent cough, and causing either speedy death or long-continued bad health. The author believes in no specific remedy, but also he believes there is no disease in which the physician can save more lives or do more good. In studying the irregularity of the pulse in several cases, he was surprised that it did not coincide with any corresponding irregularity in the heart-sounds. After much study he drew from this fact the following conclusion: that the two sides of the heart do not contract simultaneously, but in succession, the right preceding the left; and that the two sounds of the heart are produced, not in any of the various ways which have been dreamed of by physiologists and practical physicians, but the first sound by the contraction of the right side of the heart, and the second by the contraction of the left side, so that the symbols, *lub dup*, *lub dup*, when truly interpreted, are simply *right left*, *right left*. These views Dr. Buchanan believes to be borne out by observation and experiment on the living animal, but we fear they will not be accepted.

The cause of the second sound is certainly known—whatever may be the theory regarding the first.

11. Dr. Keating, in an able study of the effects of *hot baths in the treatment of the febrile affections of infancy*, contends that sweating is depletory if not eliminative; that it tends in a persistent and permanent manner toward the reduction of heat; that it is not merely the result of surface congestion, but dependent upon a distinct excito-secretory function, which may be brought about by external irritation; also that cutaneous congestion will become a means of reducing temperature, and that when both these processes are combined we possess a powerful means of lowering temperature and eliminating the specific poisonous materials or the results of their destructive action from the blood. Hot baths increase peripheral circulation, also aid and stimulate glandular secretion, and at the same time relieve nerve centers from a concentration of poisoned blood or the irritation of blood overheated, and by inducing perspiration at a high fever-point cause evaporation from the surface of the body. The warm bath should be of short duration; the water may be made more stimulating by the addition of mustard or vinegar, and the after-effect increased by a diaphoretic, such as jaborandi, and a sedative, such as one of the bromides. Should the pulse become rapid and the heart weak, digitalis may be added. If this line of reasoning is applicable to children, it is to adults also.

18. Dr. Cheadle gives two cases of *chronic tetanoid convulsion of childhood and its successful treatment by calabar bean.* The pathology of tetanoid convulsion is obscure; it is, however, probably produced by irritation reflected from the chronic intestinal irritation due to catarrh; it is closely associated with the rickety state and the disposition to laryngismus and general convulsions, and there is not unfrequently a neurotic family tendency. The tetanoid convulsions of children differ in several important particulars from the tetany of Corvisart and Trousseau, observed first and chiefly in nursing mothers. The names at one time given to it—"intermittent tetanus," "intermittent rheumatic contraction"—point to one essential difference. In the tetany of childhood the spasm is persistent, the carpo-pedal contractions do not pass off, although there may be some variation in their intensity, and fits of convulsion may occur from time to time. These cases also fail to answer to the test declared by Trousseau to be pathognomonic, viz., that the spasm can be reproduced at will by compression of the nerve trunks or of the arterial or venous circulation. Pressure of this kind produces no modification whatever of the persistent tonic spasm. The muscles harden a little on handling, but no distinct exacerbations can be excited artificially. Another feature absent from Trousseau's description is the extreme irritability of certain muscles, notably the facial, so that fibrillar contractions may be excited by merely rubbing the finger over the surface. These cases correspond, however, to the original description in being associated with diarrhœa. One of the most curious observations made was the absolute failure of chloroform to relax the muscular spasm in the slightest degree. The experiment was repeated several times, and the most complete chloroform-narcosis produced, without any appreciable effect upon the contractions. In Trousseau's cases chloroform is stated to have given instant relief. The failure of bromide of potassium and chloral was equally remarkable, while the rapid recovery under calabar bean was so striking that the experiment deserves to be repeated. In one case—a slight one—recovery followed the cessation of the intestinal flux.

27. Mr. Cripps, after showing a case of *imperforate rectum* at the Pathological Society of London, called attention to one or two interesting points. The anus was normal, and the finger passed into it about an inch and a half. The condition was diagnosticated on the third day after birth, but surgical interference was refused, and the child left the hospital. Thirty days later she was brought back again apparently quite well; the abdomen was distended; food was taken well, but three or four times every day she vomited up fæcal matter. A trocar was passed upward from the termination of the anus, but only a little serous fluid escaped. Death followed from peritonitis, and at the autopsy the anal aperture was found three quarters of an inch long, and the distended pouch-like rectum was seen to end just above it; the trocar had penetrated the peritoneal pouch between the two. Mr. Cripps laid down the general rule that, when the anus was well formed, the rectum would be within reach and should be sought for. He also thought that, had the trocar been directed back toward the sacrum, no accident would have occurred. The noteworthy point in the case is the apparent comfort of the child while in this state.

29. Dr. Smith describes the anatomical lesion of the "*summer complaint*" *of infants* as a catarrh of the lower end of the small intestine, and of the whole length of the large intestine, the inflammatory lesion being, in fatal cases, most marked in the descending colon and the sigmoid flexure, where the fæces are most apt to be delayed and to accumulate. The greater thickening and redness of the mucous membrane in this locality, to be observed on *post-mortem* examination, he believes to be chiefly due to the irritation of fecal matter, as is also the erythematous redness around the anus observed in certain cases. The ulcerations which occur sometimes in grave and protracted cases, and which are circular in form, seeming to correspond in site with the solitary glands, are also most numerous in the descending colon and the sigmoid flexure. It is a complaint peculiar to infancy, the great majority of cases occurring prior to the age of two and a half years. There are two important elements in the etiology: 1. The atmospheric heat, which acts as a causative agent, not so much by its direct effect on the system—though its direct enervating influence may act to a certain extent by impairing the general tone of the system, and the digestive function in particular—as by producing foul gaseous exhalations from the decaying organic matter which always exists in considerable quantity in the crowded homes of the poor of a large city; 2. The use of improper food; for food which the feeble digestion of the infant can not assimilate soon undergoes fermentative changes, and acts as an irritant and purgative. The popular notion with mothers that the summer complaint is more common and dangerous during the child's second summer is accounted for by the fact that a change from nursing to a mixed diet is often made at this time, and greatly aids the other causes which are then in operation. Every child under one year should, if possible, be fed at the breast during the hot season. If the mother be not competent for this, a wet-nurse should be employed. If it can not have breast-milk, it should be removed to the country during July and August. An infant should never be weaned just before the hot season.

There is no substitute for the mother's milk so good as the milk of the cow or the goat. For infants under two months it should be diluted with one third its quantity of water; for those between two and five months, one fourth or one fifth its quantity of water should be added; while for those over five months no dilution is necessary. The infant after the age of one month should not take the breast oftener than every second hour, and with artificial feeding it is well to have a longer interval. The casein of cow's or goat's milk is apt to coagulate in the stomach in large masses, which are with difficulty digested. To aid in preventing this, a thin farinaceous food, such as barley- or rice-water, well boiled, may be mixed with the milk. The farinaceous particles intimately mixed with the casein tend mechanically to prevent its coagulation in large masses. Cow's milk may also be deprived of a large part of its casein by making it into a wine whey, with a small proportion of sherry. Another expedient is to coagulate the casein by the admixture of hydrochloric acid. One half-teaspoonful of the dilute officinal acid is added to one pint of cold water; this is thoroughly mixed with two pints of cold milk, and the mixture is then boiled ten or fifteen minutes. Still another method is to allow the milk to stand for ten or fifteen minutes till the casein has settled to the bottom, and then decant the upper portion. If this should be found too rich in butter, it may be skimmed. For infants with whom cow's milk, no matter how prepared, will not agree during the summer, and with whom condensed milk does no better, a thin gruel made from barley, rice, or wheat flour (the last having by preference been boiled in a dry state several hours in a bag, and then grated) should be mixed with the milk in equal quantity, or the gruel may be in excess. By such means much may be done to assist a feeble digestion, but nothing takes the place of the breast-milk. Physiologists used to teach that young infants could digest only a small quantity of starch, since in the first months of life the amount of salivary secretion by which starch is converted into glucose is inconsiderable. It is now ascertained that there exists an epithelial ferment which effects this change as well as the saliva. Flint says the intestinal juice is itself capable of effecting the change of starch into sugar to a considerable extent, and Richet, that an epithelial ferment in the buccal cavity appears to act in the same way. The theory upon which Baron Liebig worked in his preparation of artificial food for infants was that, starchy food being digested but slowly and imperfectly by infants, the starch might be artificially changed into glucose by the action of malt. Dr. Smith claims quite a large experience with the three preparations of Liebig's food sold in the shops, viz., Hawley's, Horlick's, and Mellin's, and believes that, though they all do well in other seasons of the year, they are not good in summer. They all produce a laxative effect (owing to the large quantity of grape-sugar they contain) during those months when there is a special liability to diarrhœa.

Regarding the direct medicinal treatment, Dr. Smith gives many valuable suggestions. Calomel, formerly given in large doses under the opinion that the liver was at fault, is now generally discarded. The old dread of opium for infants has disappeared in consequence of accumulated experience of its good effects and of the little danger attending its judicious administration. Occasionally treatment may be commenced by the administration of a gentle purgative, as a single dose of castor oil, or a mixture of oil and sirup of rhubarb, when there is reason to think the diarrhœa has been started by some irritating substance which needs to be expelled, but ordinarily no such preliminary treatment is necessary. The main reliance must be upon opium and bismuth to check the passages and arrest the catarrh, and, as fermentative changes in the milk usually cause an excess of acids in the intestines, on some alkali, as the preparations of chalk. For infants under five months, opium may be safely given in the form of paregoric, in doses of three drops to an infant of one month, five drops to one of three months, and eight drops to one of five months. The interval between the doses should be about three hours. In advanced cases, in which there is incipient spurious hydrocephalus, opium is contraindicated. Bismuth is applicable in all cases, and, as long as vomiting and diarrhœa remain, it is an efficient anti-emetic. Its action seems to be mainly local, restraining the stools, increasing their consistence, and producing a soothing and curative effect upon the inflamed surface. It probably retards fermentative changes. It is changed into black sulphide of bismuth in the stomach, and, if taken in large doses, discolors the stools. It sometimes, when not pure, taints the breath with an odor of garlic. An infant of one year should take it in doses of ten or twelve grains, and one of six months in doses of from eight to ten grains. The alkalies have long been used in this disease, and with apparent benefit, for the purpose of overcoming undue acidity. Alcohol and digitalis may both be demanded in cases of prostration or failure of the heart's action. In most cases no treatment with the direct object of reducing temperature is necessary, but in cases of cholera infantum, where the temperature may rise to 104° or 106° F., this indication must be met by the free use of cold.

31. Dr. Bigelow, in dealing with the *summer hygiene of children*, speaks first of the proper course to be followed regarding the washing and dressing of the newly-born. West asserts that one child in five dies within a year after birth, and one in three before the completion of the fifth year. Apart from the most frequent causes of summer diarrhœa, such as decaying organic matters, bad drainage, and malaria, filthy streets, water and beverages contaminated by putrescent organic matter, overcrowding and neglect of ventilation, etc., the thing most to be feared is the use of artificial food from which milk is excluded, or the milk of an unhealthy nurse. The causes which compel the resort to artificial food for children are very numerous. As to whether it is best to use cow's milk well diluted or condensed milk, is a question which has been well discussed. The author's general practice is to make use of the former. Exceptionally he uses the latter in cases of young infants insufficiently nursed, or who, by reason of some idiosyncrasy, are incapable of digesting the casein of fresh milk properly diluted with water. Dr. Edward Smith says condensed milk is much liked by infants, but it is an error to assume that a given quantity, when dissolved in water, will yield new milk, or take its place, and it should never be used as a substitute where the latter can be obtained. He remarks that the addition of nearly two ounces of sugar to the pint of cow's milk greatly lessens its nutritive value, and induces a tendency to starvation of the muscle-forming element. Thus, while in natural cow's milk the proportion of nitrogen (flesh-forming) to carbon (fat-forming) is 1 to 12, in the preserved milk it is not much more than 0·5, or 1 to 20. If the object were to feed an animal for the market, it would be attained by this method, but, if to make infants into strong, muscular men and women, the proportion which Nature has provided must be supplied. If the mother, about to start out on a journey, wishes to preseve milk, she will do well to adopt the suggestion of Dr. Parkes, who says that when boiled, the bottle quite filled and at once corked up and well sealed, the milk lessens in bulk, and a vacuum forms above. It will keep thus for some time, and a little sugar aids the preservation. If the heat is carried in a closed vessel to 250° F., the milk may be preserved for years; the butter may separate, but this is of no consequence. During the first month of a child's life the fresh milk of the cow should be diluted with two parts of water, and this because the milk will be strong enough for a strong child and safer for a weak one. At two months, the proportion may be one half, and at five months two thirds milk may be allowed. For the first ten days the child will digest a pint in twenty-four hours; from the first to the second month, about a quart. During the first month the child should be fed every two hours; after that every three hours is often enough. As age increases, the amount and the intervals should both be increased. If the milk be rejected in large curds, or if there be undigested casein in the stools, lime-water should be added. The pains of an ephemeral colic may be overcome by a hot flannel, or a dose of rhubarb and magnesia, and constipation may be remedied by an enema of warm water. For the diarrhœa of teething infants nothing is better than a sweetened decoction of Jersey tea (*Ceanothus Americanus*). The early morning and evening should be selected for the daily airing, which should never be neglected.

When a child at the breast is seized with diarrhœa, the stools should in all cases be examined, and, should curd be found, a little barley-water should be alternated with the breast-milk; or, if the milk be white and heavy, barley-water alone may be used. Dr. Jacobi suggests the following: Mix the white of one egg with four or six ounces of barley-water, and add a small quantity of table-salt and sugar to render palatable. If the strength be much reduced, brandy may be given, from one drachm to one ounce in twenty-four hours. In very severe cases, complicated with persistent vomiting and gastric catarrh, absolute abstinence should be enforced for periods of three or five hours. The following is quoted from Dr. Jacobi ("Am. Jour. Obstet.," July, 1879): "I need not here say that, in addition to the dietetics for the digestive organs, it is necessary to supply the patient with as much cool, fresh air as possible. The worst out-door air, when cooler, is better than close, in-door air. The undeveloped condition of the nerve-centers in the normal infant; the relaxation of the inhibitory nerves by heat; the absence of radiation from the surface—the lacking stimulus, during hot weather, of the cutaneous sensitive nerves; the diminished metamorphosis of tissue; the diminution of the powers of digestion, not only by shortening digestion, but by directly lowering the secreting powers of the digestive glands in the stomach and intestines, are just so many factors in the production of the very worst forms of infant diarrhœa. I have kept very bad—desperate—cases out all night, upon the bluffs over the East River. The windows must not be closed. If possible, the children should be sent immediately to the country, and into the mountain air."

33. These lectures on the *surgery of childhood* cover a wide range, and contain much that is useful and practical. Dr. Owen's forcible statement that rickets is not merely a disease of bone which is shown by curvilinear and rectangular deformities, but a disease of nutrition—a constitutional condition—needs only to be read to be accepted. The two chief factors in its production he considers to be improper food and insufficient clothing. After unwillingness or inability on the part of the mother to suckle her child, comes prolonged suckling in the order of harmfulness. As for condensed milk as a substitute for the breast, he does not profess to know the exact composition of "this lacteal jam," but he does know that it is never a fresh product, but that it is often stale and always over-sweetened. He condemns it for food on the ground that its use is often attended with sickness, diarrhœa, eczema, and rickets. All mixing of powdered biscuit, baked flour, or oatmeal with milk is reprobated. With these general introductory remarks, the author proceeds to some valuable practical observations on the treatment of the various rachitic deformities.

In speaking of *hernia in children*, he relates a case in which a large ulcer in each groin was caused by the pressure of a double truss, which probably never was indicated in the first place. The most troublesome cases of congenital hernia are those which are associated with an undescended testis; if a truss be applied for the hernia the testicle is also prevented from descending, and an infant in this condition should be kept lying as much as possible, to avoid the necessity for an instrument. He has seen good results from instructing the nurse to constantly coax down the gland by pressing upon it from above, but supposes that in most of these cases of undescended testicle, and of those in which it finds its way into the perinæum, it will be found physiologically worthless. Perhaps the most common cause of hernia in childhood is an adherent prepuce or small preputial opening, causing frequent and forcible expulsive efforts. That a long prepuce is apt to give rise to irritation of the bladder is well known. It is the converse of the proposition that stone in the bladder causes itching at the end of the penis. By day the boy endeavors to allay the irritation by pinching the prepuce, but by night, when the brain is dormant, and the voluntary movements are suspended, and the supervision of the genito-urinary tract is given over to the well-meaning but misguided cells of the gray matter of the cord, a slight physiological mismanagement is apt to occur. The sensory filaments which are distributed to the muco-cutaneous tissue at the end of the penis are derived from the internal pudic trunk, itself a branch of the sacral plexus. The nerves of this 'plexus lose themselves in the gray matter of a certain part of the spinal cord, from which are passing out, through the same interlacement, the efferent fibers which are destined for the supply of the muscular walls of the bladder. But, more than this, that same colony of cells receives the filaments which carry up sensations from the mucous membrane which lines that viscus. It may be on account of the exceeding instability of the protoplasmic substance of those cells; or it may be that by education and design they are more especially occupied with the care of the bladder rather than of the end of the penis; but, in one way or another, they are induced to interpret the isomeric transformations propagated by the axis-bands of the filaments coming from the latter and less important area as messages of unrest and distress from the bladder itself. Now, for this disquieting condition, they know of one, and only one, means of affording relief, and, putting it in force, in the morning the unfortunate boy is perhaps severely reprimanded for having unconsciously wetted his bed.

Nævi.—For curing small nævi almost any treatment avails, but the large subcutaneous vascular tumors often met with in infancy are troublesome and obstinate in the extreme. For these, ethylate of sodium is almost useless, while electrolysis has to be employed time after time before effectual impression can be made on them. This process, being painful in the extreme, demands the frequent administration of an anæsthetic. The treatment by setons soaked in perchloride of iron is often effectual, but tedious. In the experience of the author, Paquelin's thermo-cautery affords the best means of attacking and destroying the largest nævus, almost with certainty, at a single sitting.

Eczema at the Umbilicus.—Close around the cicatrix is a red and irritated or eczematous patch of skin, while from the depths of the umbilical fossa oozes a thin purulent fluid. For the cure of this affection lotions and all other kinds of dressings avail nothing; for at the bottom of the depression, hidden by overhanging folds of skin, there is a small fleshy polypus which has sprung from the scar of the fallen umbilical cord. By ligature of the growth the disease is at once cured.

Imperforate Rectum.—In the ordinary course of development, the blind end of the intestinal canal descends into the pelvis, but remains separated by a considerable thickness of tissue from the surface of the perinæum. Subsequently a depression, which appears at the site of the future anus, traverses the horizontal partition, and so the intestinal outlet is completed, but, if the involution fail to perforate the partition, a perfectly formed anus will exist with complete obstruction. Digital examination should invariably be made when an infant passes nothing *per anum*. The rectum may end high up in the pelvis, being represented in the lower portion by a fibrous cord which is connected with the top of the anal *cul-de-sac*. What should be the treatment adopted when no trace of the descending rectum or of the anal *cul-de-sac* can be detected? Exploratory puncture into the anatomical darkness will probably accelerate the fatal peritonitis. First, the infant having been placed in the lithotomy posture, and being under the influence of an anæsthetic, a careful dissection should be made in the middle line of the pelvic outlet, the finger working with the scalpel step by step, close up in front of the coccyx and sacrum, and a sound should be held in the vagina or empty bladder; and, if the search be futile, the colon must at once be opened. Many parents would prefer to have their child sacrificed decently—that is, under the operative interference of a surgeon—rather than spared by his skill, if in the latter case the subject were to submit to the life-long infliction of an artificial anus; but no sentiment of this kind must be allowed to come between the surgeon and his duty. Amussat's operation is not adapted for the newly-born, for in these subjects the sigmoid flexure is so thoroughly invested in a meso-colon that it is enabled to wander across the aorta and even to the opposite flank. He who attempts the extra-peritoneal operation in an infant may consider himself fortunate if he even succeed in finding a piece of the large intestine at all, and the author doubts if the gut has been as often opened without damaging the peritonæum as the operation and search for the intestine have been abandoned. But the operation in the groin (Littré's) is simple enough. After the ineffectual search in the perinæum has been abandoned, the child is laid supine, and an incision is made in the left iliac region as if the external iliac artery were to be ligatured; but the peritonæum is to be freely opened, and then a coil of the sigmoid flexure, strangely free of mesenteric fetters, will escape through the aperture. Mr. Owen has had an unfortunate experience with these cases, which, as he says, would probably never come to light in any other way except in a systematic course of lectures; "for medical readers are so accustomed to the perusal of the accounts of the sunshine of our art, that histories such as these might appear as a dark cloud, from beneath which one might never again have escaped." He has performed Littré's operation five times. The first operation was on a male child three days old, who had no anal piece of rectum; it did perfectly well after the operation, but, when it was three months old, another attempt was made to establish an anus in the proper position, using as a guide a bougie passed from the flank down into the pelvic piece of rectum. This operation set up a fatal peritonitis. The second case was that of a boy two days old; the sickness ceased after the operation and the infant took milk, but it died after three days. The third patient was, like all the others, greatly relieved by the operation, but it died on the fourth day. The fourth infant was a female; and, showing how freely the large intestine was surrounded by peritonæum, the cæcum and vermiform appendix escaped from the abdomen as soon as the left groin was opened. The child died on the third day. The fifth subject had a perfect anal *cul-de-sac;* the abdomen was greatly distended. On opening the left iliac fossa, coils of colon escaped of the caliber of an ordinary vaginal speculum, and with a mesentery two inches wide. The patient flourished; but, at the end of three months, another attempt was made to establish the continuity of the two portions of the rectum, as they seemed to be separated by but a thin layer of tissue, through which a director was easily passed, and the wound so made dilated. Unfortunately the upper rectal *cul-de-sac* was completely covered with peritonæum, and the baby died the next morning of peritonitis. The groin-operation of colotomy in the newly-born is as simple as that by the loin is difficult, and has much to commend it. The operation in the loin may, no doubt, be performed in an infant without wounding the peritonæum (Mr. Curling has had one such case); but, though it be wounded in one or even more places, the result may still be satisfactory. In Mr. Curling's well-known tables, nine cases of recovery from the inguinal operation and only two from the loin find a place. Granted, then, that an artificial anus is to be made, let the groin be opened, and let no sharp instrument be plunged upward into the interior of the pelvis through the carefully performed dissection in the perinæum. Let there be no delay; no waiting for symptoms which, in tender babes, are but the beginning of the end. No expectation of a manifest bulging of the upper portion of the bowel should delay the operation, for the meconium may grow firm and scanty from absorption of the watery part.

Scarlet Fever following Operations.—One of the most interesting questions in connection with the surgery of childhood is that concerning the nature of the erythema which is apt to occur within a few days after the infliction of a wound. Is it a mere erythema? is it septicæmic? or is it scarlet fever? The author gives two cases in detail from his own practice, both of which, he is satisfied, were real scarlet fever. Each child had probably been exposed to the infection a short time before the operation, and (adopting a view of Sir James Paget) it might not have manifested its effects so soon, if at all, unless the health had been exhausted or disturbed—an explanation which is extremely useful in accounting for the early appearance of the eruption so often noticed after the infliction of open wounds. In his "Clinical Lectures," Sir James Paget says that he can not doubt that there is something in the consequences of surgical operations which renders the little patients peculiarly susceptible to the influence of the scarlet-fever poison; and he submits a highly interesting speculation, viz., that children who have died of obscure symptoms a day or two after an operation succumbed to the influence of a scarlet-fever poison which had been hindered in some way from making its usual progress. That the disease is really scarlet fever seems to be proved by the following observations: 1st, It occurs in epidemics; 2d, In a given epidemic, a severe case occasionally relieves the monotonous occurrence of very mild forms; 3d, A precisely similar scarlatinella attacks, in the same epidemic, patients who have not been subjected to an operation, and who have no open sore; and, lastly, however freely these patients are exposed to ordinary scarlet fever afterward, they do not contract that disease. In the "British Medical Journal," 1878, Mr. George May, Jr., gave some interesting clinical remarks upon septicæmia simulating scarlet fever, and also offered suggestions for their differential diagnosis. Dr. Broadbent has also remarked that an interesting analogy exists between the short course run in the incubation and manifestation of the scarlet-fever poison when received through an open wound and that of inoculated small-pox; that when the germs of the latter disease are introduced into the system in the ordinary way the period of incubation is twelve days, but when they enter through the inoculation-wound the rigor and fever show themselves as early as the seventh or eighth day. In Dr. Broadbent's experience, twenty-four hours more than suffice for the reception in the ordinary way and for the incubation of the infection of scarlet fever, and also for its manifestation; and a few hours seem to be sufficient when the poison is received through an open wound. Botanists tell us that when forest trees—the growth, perhaps, of centuries—have been cut down, immediately there may spring up from that same soil a race of plants such as have not been before observed within that wooded area. The seeds must have been there for an indefinite time, quiescent, until the saw and axe of the woodcutter so disturbed the existing condition of affairs that they were enabled to assert their existence. And may it not be thus that the frequent occurrence of scarlet fever, after operations or other wounds, is to be explained? The germs of the disease have been quietly awaiting their chance of development for no one can say how many days; then comes the surgeon, who, by the use of his knife, effects such a change in the arrangement of the nutritive forces—a change which, with our present methods of clinical investigation, is to us quite inappreciable—that germination proceeds with such activity that within a few hours the patient is covered more or less entirely with a more or less typical rash. What wonder if the exanthem which manifests itself in such circumstances runs an anomalous, and at times imperfect, course? Thankful should we be when its premature and hurried birth has rendered it vitiated and occasionally inactive.

QUARTERLY REPORT ON DERMATOLOGY.

No. II.

BY GEORGE HENRY FOX, M. D.,

CLINICAL LECTURER ON DISEASES OF THE SKIN, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; PHYSICIAN FOR SKIN AND VENEREAL DISEASES TO THE NEW YORK DISPENSARY.

1. **FARQUHARSON**, R.—On the use of arsenic in skin diseases. "Brit. Med. Jour.," May 29, 1880.
2. **GALE**, H. S.—Memoranda on skin diseases. "Lancet," April 17, 1880.
3. **JAMIESON**, W. A.—General exfoliative dermatitis. "Edinb. Med. Jour.," April, 1880.
4. **RITTER**, G.—Die exfoliative Dermatitis jüngerer Säuglinge, und Cazenave's Pemphigus foliaceus. "Arch. f. Kinderheilk.," I, 2, 1880.
5. **QUINQUAUD**.—La dermite aiguë grave, primitive. [Soc. Anat., Paris.] "Progr. Méd.," May 29, 1880.
6. **BLACHEZ**.—Eczéma généralisé. Accès de dyspnée. "Gaz. Hebdom.," May 21, 1880.
7. **BULKLEY**, L. D.—On the management of infantile eczema. "Practitioner," April, 1880.
8. **CARABELLI**, C.—L'oleato di zinco nella cura dell' eczema. "Giorn. Ital. delle Mal. Veneree e della Pelle," April, 1880.
9. **GOLTZ**, G.—Ueber eine eigenthümliche Form von Erythem. "Deutsche med. Wochenschr.," April 24, 1880.
10. **SILBERMANN**, O.—Zur Kenntniss der Erytheme im Kindesalter. "Arch. f. Kinderheilk.," I, 7, 8, 1880.
11. **VAN HARLINGEN**, A.—Case of chronic inflammatory tuberculo-vesicular skin disease. "Arch. Dermatol.," April, 1880.
12. **HILLAIRET**.—Diagnostic, étiologie, anatomie pathologique, et traitement de l'acné inflammatoire. "Progr. Méd.," Feb. 7, March 6, 27, April 14, 1880.
13. **HILLAIRET**.—De l'acné inflammatoire.—Acné boutonneuse.—Acné simple. "Progr. Méd.," March 27, 1880.
14. **STOWERS**, J. H.—Lupus; its nature and pathology. "Brit. Med. Jour.," May 1, 1880.
15. **D'ALESSANDRO**.—Sopra un caso di lupus. "Giorn. Internaz. delle Sci. Med.," fasc. 2, 1880.
16. **HUTCHINSON**, J.—Lupus and its treatment. "Brit. Med. Jour.," May 1, 1880.
17. **SQUIRE**, B.—On the treatment of lupus by linear scarification. "Brit. Med. Jour.," May 1, 1880.
18. **ANDERSON**, McC.—On the use of iodide of starch in the treatment of lupus erythematodes. "Brit. Med. Jour.," May 1, 1880.
19. **FOX**, T. C.—Note on the neurotic origin of lichen planus. "Brit. Med. Jour.," March 13, 1880.
20. **FINNY**, J. M.—Purpura hæmorrhagica. "Brit. Med. Jour.," May 29, 1880.
21. **SANGSTER**, A.—Two cases in which purpuric erythematous eruptions were present. "Med. Times and Gaz.," May 15, 1880.
22. **DUFFEY**, G. F.—Iodic purpura. "Dublin Jour. Med. Sci.," April, 1880.

23. Smith, W. R., Sr.—A case of intra-uterine ichthyosis. "Am. Jour. Obstet.," April, 1880.
24. Zeissl, M.—Ein Fäll von vereiterndem Rhinosklerom. "Wien. med. Wochenschr.," May 29, 1880.
25. Busey, S. C.—A contribution to the pathology of the cicatrices of pregnancy. "Trans. Am. Gyn. Soc.," vol. iv, 1879.
26. Cottle, W.—Treatment of ringworm. "Lancet," March 27, 1880.
27. Cottle, W.—Notes on the treatment of ringworm. "Brit. Med. Jour.," May 29, 1880.
28. Forlanini.—Studî sulla anatomia patologica e la natura del kerion (Celsi) o vespaio del capillizio (Dubini). "Giorn. Ital. delle Mal. Ven. e della Pelle," Feb., 1880.
29. Roddick, T. G.—Remarkable case of favus. "Montreal Genl. Hosp. Rep.," vol. i, 1880.
30. Profeta.—L'alopecia acquisita. "Giorn. Internaz. delle Sci. Med.," fasc. 3, 1880.
31. Smith, W. G.—On a rare nodose condition of the hair. "Brit. Med. Jour.," May 1, 1880.
32. ———.—Malignant pustule. [Editorial.] "Brit. Med. Jour.," May 29, 1880.
33. Amidon, R. W.—Pathological changes in the skin in a case of facial erysipelas. "Arch. Dermatol.," April, 1880.
34. Laboulbène.—Éruptions vaccinales généralisées. [Soc. Méd. des Hôp., Paris.] "Gaz. Hebd.," June 4, 1880.
35. Stokes, W.—Vaccinia gangrænosa. [Med. Soc. Coll. Phys. Ire.] "Brit. Med. Jour.," June 5, 1880.
36. Bell, B.—Animal vaccination. "Edinb. Med. Jour.," May, 1880.
37. Duckworth, D.—A case of rubeola (Rötheln). "Lancet," March 13, 1880.
38. Tomkins, H.—The diagnosis of Rötheln. "Brit. Med. Jour.," May 29, 1880.
39. Burnie, W. G.—The diagnosis of Rötheln. "Brit. Med. Jour.," June 5, 1880.
40. Bowerbank, L. Q.—Observations on yaws. "Med. Times and Gaz.," April 3, 1880.
41. Moncorvo et Aranjo, S.—Sur le traitement de l'éléphantiasis des Arabes par l'emploi simultané des courants continus et des courants intermittents. [Acad. des Sci., Paris.] "Gaz. Méd. de Paris," May 15, 1880.
42. Marcacci, G.—Nota clinica e anatomo-patologica sopra un caso di elefantiasi venosa. "Giorn. Ital. delle Mal. Veneree e della Pelle," April, 1880.
43. Bemiss, J. H.—A few cases of leprosy. "New Orleans Med. and Surg. Jour.," April, 1880.
44. Cowley, L. M.—La secuestracion de los leprosos. "Crón. Méd.-Quirurg. de la Habana," April, 1880.
45. Rosa und Kerschbaumer, F.—Zur Diagnostik einiger Bindehautkrankheiten. "Med.-chir. Centralblatt," Jan. 23, 30, Feb. 6, 13, 27, 1880.
46. Baker, M.—Five cases of localized scleroderma; remarks. "Lancet," April 17, 1880.
47. Wigglesworth, E.—New formations. "N. Carolina Med. Jour.," May, 1880.
48. Hardaway, W. A.—Case of multiple tumor of the skin, accompanied by intense pruritus. "Arch. of Dermatol.," April, 1880.
49. Campana, R.—Della polvere di goa nella cura di alcune dermopatie. "Giorn. Internaz. delle Sci. Med.," fasc. 1, 1880.

2. Gale has observed three cases of *herpes gestationis*, and speaks of their resemblance to "recurring pemphigus," as regards both appearance and course. In their treatment he resorted to the plan which has been almost universally condemned, viz., that of opening the blisters and applying lunar caustic. After two or three applications of the caustic, the patient said she felt "as if in heaven." Considering the fact that the application of caustic is very apt to produce an opposite sensation, we can hardly agree with the writer in his belief that the cauterization afforded relief, especially since in bullous affections the tense and burning sensation in the skin is generally relieved by the outbreak of vesicles or bullæ. The cases differed from those recorded by Milton in the following particulars: 1. No stain was left after involution; 2. In one case the eruption was chiefly on the chest, abdomen, and back, and hardly at all on the limbs; 3. No solid papules appeared, but merely the condition seen in mild erythema papulatum; 4. Neither blebs nor vesicles formed till after delivery; 5. Neither grouping of vesicles nor crusting took place; 6. The vesicles had no inflamed base.

16. In opening the discussion on *lupus*, at the meeting of the British Medical Association at Cork, August, 1879, Mr. Hutchinson read a paper in which he expressed some characteristic views respecting the etiology of the disease, or, rather, its association with certain constitutional conditions. The evidence is overwhelming, he thinks, that lupus is wholly independent of syphilitic taint. At the same time an attack of syphilis may evoke the lupous process, the tendency to which might otherwise have remained latent. In such a case, the syphilis stamps the hybrid malady with its own mark. The reasons given why lupus is distinct in nature from syphilis are the following: It attacks young persons who are not likely to suffer from acquired syphilis, and is common in single members of large families, the other members showing no indications of inherited taint. Lupus patients, with rare exceptions, do not present the peculiar physiognomy, the characteristic teeth, nor the tendency to keratitis and nodes, which are so common in the subjects of inherited syphilis. Finally, lupus can not be cured nor even influenced favorably by the specific medication which is so indispensable in syphilis. The hypothesis that lupus is a manifestation of syphilis appearing in the third generation has no basis in fact, and is highly improbable. The constitutional conditions which favor the development of lupus are three, viz., that state of health which is known as scrofula, that which produces relapsing symmetrical skin diseases of the psoriasis type, and that condition of feeble circulation which favors the occurrence of chilblains, and which the writer speaks of as the "chilblain diathesis." As the disease acknowledges this variety of parentage, it is not strange that it does not always preserve unity of type, and is an affection which must be described rather than defined. Just as sanity and insanity are divided by no sharp line of demarkation, and what one might call prudence another would regard as avarice; so lupus may be so modified in its nature that it is not always possible to distinguish it from other recognized forms of skin disease. The lupous process is one of cell-growth, attended by the ordinary phenomena of inflammation. This cell-growth has the property of infecting the adjacent healthy tissue, and hence, by virtue of the law of contagion by continuity, lupus is always serpiginous. While tending to lateral growth, however, it never shows any tendency to involve the deeper tissues, and in this respect differs from the forms of new growth which are classed as malignant. The writer insists upon the applicability of the term lupus to all forms of scrofulous disease of the true skin, and remarks that what is sometimes vaguely spoken of as scrofuloderma differs only in the circumstance of its beginning in the subcutaneous cellular tissue or lymphatic glands, and involving the

skin secondarily. In his description of the forms of lupus, the writer discards the old terms *exedens* and *non exedens*, pointing out the fact that the process, which on flat surfaces would not cause deep destruction of tissue, would lead to destruction of the nose in case that organ were the seat of the affection. In common with most dermatological writers, he makes a grand division of lupus into two types: lupus erythematosus and lupus vulgaris; but, unlike some writers, he does not regard these as distinct affections. The tendency to symmetrical development is spoken of as the most characteristic and distinguishing feature of the former. While we admire the broad view of the writer as to the etiology and relationship of lupus, and believe with him that the attempt to force clinical facts into accord with preconceived notions is making Nature "fit herself to molds which are not of her making," we must deplore this tendency to subvert nomenclature by the introduction of such useless, or worse than useless, names as *lupus-psoriasis*, *acne-lupus*, and *eczema-lupus*. Having endeavored to show that lupus is mainly a scrofulous malady, that it is influenced by causes which produce chilblains, and that in some cases it has an alliance with psoriasis, the writer naturally advocates the resort to tonics, good food, bracing air, cod-liver oil, the judicious use of stimulants, and, finally, that specific for psoriasis—arsenic. He advises to send patients to a warm climate in winter, or keep them in the house as much as possible. But the local process must be cured by local measures, and these may be summed up in the one word—destruction. To destroy the lupous growth "without delay and without flinching," the use of caustics, the actual cautery, and Volkmann's erasion method have been employed by the writer, who unhesitatingly expresses his preference for the last-named. Caustics are painful, although efficacious when freely used, but the sores left granulate well and heal quickly. The actual cautery is comparatively painless, and is efficient, but its burns are sometimes slow in healing. Erasion, or scraping, leaves a sore which heals rapidly and soundly.

17. Mr. Squire regards *multiple linear scarification for lupus*, an operation first proposed by him, as an improvement on the multiple *punctiform* scarification as advocated by Dubini, of Milan, and Volkmann, of Halle. Both methods of treatment effect a prompt decrease of the hyperæmia of a lupus patch by section of the capillaries, and at the same time they cause a disappearance of the new formation peculiar to lupus, by exciting traumatic inflammation. The writer claims that his method of treatment causes no loss of substance, a point of considerable importance in a disease which is especially prone to attack the face and often the nose. In lupus of the nose, where caustics, like the disease itself, would tend to destroy the organ, linear scarification, as shown by Vidal, will actually rebuild it. In other words, the lupous tissue, which has replaced the substance of the true skin, becomes actually the material out of which repair is effected. The writer does not speak of internal remedies, as he has found them to fail. He uses an instrument constructed for the purpose, and freezes the skin with ether-spray before cutting. The little cuts heal completely within a week, so as to permit a repetition of the operation. In time they disappear and leave no trace. The first operation is followed in a few days by a satisfactory amelioration of the disease, and a few repetitions insure a complete and often a lasting cure.

18. In many cases Anderson has used the *iodide of starch internally in lupus erythematosus*, and, while in some cases no result whatever has followed, in a fair proportion of them much benefit has accrued. He therefore regards the remedy as a valuable addition to our means of combating one of the most obstinate diseases of the skin, although it is far from being infallible. By the use of iodide of starch, a remedial agent first recommended by Dr. Andrew Buchanan, large quantities of iodine can be intro-

duced into the system. The following is the formula for its preparation: ℞. Iodinii gr. xxiv, amyli ℥j. Triturate the iodine with a little water, gradually adding the starch, and continuing the trituration till the compound assumes a uniform blue color, so deep as to approach to black. The iodide should be dried with a heat so gentle as to involve no risk of driving off the iodine, and it ought to be kept in a well-stoppered bottle. On no account should spirit be used in its preparation, instead of water, as sometimes recommended. The dose is a heaped-up teaspoonful, in a draught of water or water gruel, thrice daily; but it may safely be increased even up to an ounce in some cases, if necessary, to make an impression on the disease. No benefit need be expected in cases of lupus other than those of the erythematous form, and the medicine, to be effective, must be freshly prepared, and in accordance with these directions.

27. Cottle reports ten cases of *ringworm of the scalp* cured by the application of a croton-oil liniment, followed by the use of a lotion or ointment of salicylic acid. The object in applying the croton oil is to set up a suppurative inflammation which may destroy the parasite in the depths of the hair follicles. This plan of treatment is adapted only to chronic cases, and to those in which there is little or no eczematous tendency.

31. Dr. W. G. Smith writes an interesting paper founded on his observation of a case of *rare nodose condition of the hair.* The hair was uniformly thinned and short. The hair follicles projected so as to form small pale or pink elevations, especially on the nape of the neck. Many of the hairs were bent abruptly at a right angle, and the shorter hairs presented a succession of dark, fusiform swellings about a millimetre apart. The affection was of four years' standing, having begun at the age of fifteen. No sign of a fungus was discernible on microscopic examination, and the features of the case which served to distinguish it from the affection described as *trichorexis nodosa* are summed up by the writer as follows: 1. There is little tendency to partial fracture, fraying of the cuticle, or splitting of the cortex. 2. The altered hairs are found in multitudes on the scalp. Trichorexis is rarely found on the hairs of the head. 3. When traction is made on the hair, the breakage takes place at a constriction, never through a node. 4. The nodes are opaque and dark. In trichorexis the so-called nodes are usually white. 5. The average width of the nodes was two and a half times that of the narrow internodes. In trichorexis the diameter of the shaft is not increased to any notable extent. 6. The nodes are very numerous. 7. Trichorexis nodosa is very common; the nodose malformation is rare.

34. Mr. Bell, writing on *animal vaccination*, refers to the continued existence of small-pox in Great Britain, and believes it to be in great part the result of using an inferior quality of vaccine lymph. In case of an epidemic of variola, and the consequent occurrence of a "vaccine famine," there is always a temptation to employ lymph from sources which, at other times, would be avoided. Feeble, unhealthy, not to say diseased children, have often been the media through which the virus has been handed down in arm-to-arm vaccination during the past eighty years; and now the stock of virus furnished by the National Vaccine Institution is considered by the writer to be greatly inferior to that taken directly from, or but a few removes from, the cow. He alludes in high terms to the report of Dr. Martin, of Boston, and urges Government support for vaccine establishments such as exist in this country.

39. Burnie offers the following points as aids in *the diagnosis of Rötheln:* 1. The rash is vivid, and in small patches, the patches not being markedly crescentic. 2. There is no coryza or cough. 3. The temperature rarely exceeds 102° F. 4. The illness is of short duration (seldom lasting a week), and mild. 5. The patient does not infect others with scarlet fever; and albumen is absent from the urine. Desquamation often occurs about the fifth or sixth day, and is sometimes profuse.

QUARTERLY REPORT ON ORTHOPÆDIC SURGERY.

No. I.

By CHARLES T. POORE, M. D.,
SURGEON TO ST. MARY'S FREE HOSPITAL FOR CHILDREN.

1. Owen, E.—Abstract of lectures on certain practical points in connection with the surgery of childhood. "Brit. Med. Jour.," Feb. 21, 28, 1880.
2. Shaffer, N. M.—The hysterical element in orthopædic surgery. New York: G. P. Putnam's Sons, 1880.
3. Gibney, V. P.—Periarthritis: a study of forty-seven cases. "N. Y. Med. Jour.," May, 1880.
4. Charteris, M.—Erb's spastic paralysis. "Lancet," May 29, 1880.
5. Bradford, E. H.—Two cases of paralytic affections in children; with remarks. "N. Y. Med. Jour.," July, 1880.
6. Clark.—Disease of the spine without curvature. [Path. and Chir. Soc., Glasgow.] "Brit. Med. Jour.," April 24, 1880.
7. Sayre, L. A.—Pott's disease of the spine. "Boston Med. and Surg. Jour.," Jan. 1, Feb. 12, April 1, 22, June 3, 17, 1880.
8. Croly.—Spinal abscess. "Brit. Med. Jour.," May 8, 1880.
9. Lange, F.—Remarks on the treatment of cold abscesses, especially in connection with Pott's disease. "N. Y. Med. Jour.," May, 1880.
10. Vogt, P.—Die mechanische Behandlung der Kyphose. "Arch. f. Kinderheilk.," I Bd., 5 u. 6 H., 1880.
11. Wood, J.— Remarks on the employment of double extension in cases of disease and injuries of the spine and pelvic joints. "Brit. Med. Jour.," June 5, 1880.
12. Bradford, E. H.—Treatment of Pott's disease by the plaster-of-Paris jacket. "Boston Med. and Surg. Jour.," May 13, 1880.
13. Coskery, O. J.—A case of fracture of the spine treated with a modified "Sayre's jacket." "N. Y. Med. Jour.," March, 1880.
14. Hemsted, E.—Application of plaster-of-Paris bandages. "Brit. Med. Jour.," Feb. 7, 1880.
15. Adams, W.—On the treatment of lateral curvature of the spine by steel supports, plaster-of-Paris jackets, and poroplastic jackets. [Roy. Med. and Chir. Soc.] "Brit. Med. Jour.," May 29, 1880.
16. Hunter, C. T.—The leather jacket in the treatment of spinal curvature. "Boston Med. and Surg. Jour.," June 17, 1880.
17. Steele, C.—On chair-supports in spinal curvature. "Brit. Med. Jour.," June 5, 1880.
18. Mursick, G. A.—Cases of injury and disease of the larger joints. "N. Y. Med. Jour.," June, 1880.
19. Rouse.—A curious case of osteo-arthritis of the hip. "St. George's Hosp. Rep.," 1877–'78.
20. Le Fort, L.—Coxalgie suppurée suraiguë; mort après quatre jours, avec lésions septicémiques du péricarde et cœur. "Bull. et Mém. de la Soc. de Chir. de Paris," 1880, 10, 12.

21. Bryant, T.—The value of parallelism of the lower extremities in the treatment of hip-disease and hip-injuries, with the best means of maintaining it. "Lancet," Jan. 31, 1880.
22. Croft, J.—Forty-five cases of exsection of the hip. [Clin. Soc., London.] "Brit. Med. Jour.," Jan. 5, 1880.
23. Macewen.—Excision of the hip-joint. "Glasgow Med. Jour.," May, 1880.
24. Parker, R. M.—A new method of excising the hip-joint. [Clin. Soc., London.] "Brit. Med. Jour.," Jan. 3, 1880.
25. Barwell, R.—Section of the femur above the small trochanter for angular anchylosis of the hip. [Clin. Soc., London.] "Brit. Med. Jour.," May 29, 1880.
26. Macewen.—Osteotomy for genu valgum; death from diphtheria. "Brit. Med. Jour.," April 24, 1880.
27. Kilgriff, W. J.—Osseous anchylosis of the knee, operated on by Barton's method. "Dublin Jour. Med. Sci.," March, 1880.
28. Smith, T.—Abstract of a clinical lecture on some points connected with the operation of resection of the knee-joint. "Med. Times and Gaz.," Jan. 10, 1880.
29. Baker, H. F.—On the treatment of genu valgum without division of bone. "Brit. Med. Jour.," May 22, 1880.
30. Gant, F. J.—Excision of the knee-joint for synovial disease of fourteen years' duration. "Brit. Med. Jour.," May 22, 1880.
31. Watson, E.—Management of cases of excision of the knee-joint. "Brit. Med. Jour.," Dec. 13, 1879.
32. Terrillon.—Rapport sur une communication de M. Beauregard et relative à une ostéotomie pour le redressement d'un genu valgum. "Gaz. Méd. de Paris," Jan. 3, 1880.
33. Poore, C. T.—The cause and treatment of genu valgum. "Med. Record," May 22, 29, 1880.
34. Yeats.—Osteotomy for knock-knee and bow-legs. "Brit. Med. Jour.," April 17, 1880.
35. Roper.—Suppuration of knee after gout. "Brit. Med. Jour.," Jan. 24, 1880.
36. ——.—Report on the various methods of treating caries of the ankle-joint, the result of chronic disease: whether by excision, gouging (chiseling or spooning), extension, rest, or the expectant plan. [Therap. Soc. of New York.] "New York Med. Jour.," April, 1880.
37. Gibney, V. P.—Caries of the ankle in children. "Am. Jour. Obstet.," April, 1880.
38. Buckley, S.—A case of cervical caries. "Brit. Med. Jour.," April 3, 1880.
39. Walton, H.—Two cases of bony anchylosis of the elbow-joint treated by subcutaneous osteotomy of the lower end of the humerus; union in a useful position. "Lancet," April 3, 1880.
40. Fagan, J.—Notes on diseases of the wrist; with report of a successful case of excision of that joint in a child six years old. "Brit. Med. Jour.," May 22, 1880.
41. Puzey, C.—A simple and cheap splint for the extension of contracted wrist and fingers. "Brit. Med. Jour.," May 22, 1880.
42. Post, A. C.—On certain unusual deformities of fingers and toes. "Med. Gaz.," Feb. 28, 1880.
43. Clark.—The normal length of the condyles of the femur. [Path. and Clin. Soc., Glasgow.] "Brit. Med. Jour.," April 24, 1880.
44. Daly, W. H.—Elongating hypertrophy of the femur and tibia of opposite sides (osteitis deformans of Paget). "Med. Record," Feb. 28, 1880.

45. Clutton.—A case of acquired hypertrophy of one limb. [Clin. Soc., London.] "Med. Press and Circular," June 2, 1880.
46. Abbe, R.—An operation for the relief of anchylosis of the temporo-maxillary joint, by exsection of the neck of the condyle of the lower jaw; with remarks. "N. Y. Med. Jour.," April, 1880.
47. Bradford, E. H.—A case of posterior torticollis, treated successfully by Delore's method. "N. Y. Med. Jour.," Jan., 1880.
48. Hamilton, A. McL.—The physiological treatment of wry-neck. "N. Y. Med. Jour.," Feb., 1880.
49. Bishop, E. S.—Apparatus for treating cicatrices of the neck. "Lancet," June 5, 1880.
50. Marsh, H.—Cases of bone-setting. [Clin. Soc., London.] "Brit. Med. Jour.," April 17, 1880.
51. Gay, C. C. F.—Refracture for the correction of deformities from malunion of bone. "Med. Gaz.," Feb. 14, 1880.

1. In the treatment of *genu valgum*, Owen advocates the use of straight wooden splints placed on the outer side of the limb, and extending from the upper part of the thigh to six inches below the foot, the force being applied by means of inelastic webbing. For double genu valgum he places a large pad between the knees, and straps the legs together.

In regard to the impossibility of causing any change in the amount of deformity at the point of disease in *caries of the vertebræ* by suspension, he tried the following experiment: A boy, ten years of age, with extensive caries in the dorso-lumbar region, died from exhaustion. Having taken away the anterior wall of the abdomen, and extracted the viscera from the cavity, he inserted a large pin into the body of a sound vertebra above the point of disease, and another below, and carefully measured the distance between the pins while the body lay on the table. He then suspended the body from the arms, and made another careful measurement, when it was found that there was not the slightest variation between the two.

6. In Clark's case of *disease of the spine without curvature*, a specimen was shown from a patient who had had disease at the second and third dorsal vertebræ. The intervertebral disks had disappeared; the bodies were united by bony pillars on either side of the cavity, which prevented curvature. Dr. Foulis also showed the spine of a middle-aged man, in whom a gradually increasing paraplegia had set in four weeks before death. The body of the sixth dorsal vertebra had disappeared. There was no curvature. Pus had made its way into the spinal canal.

12. Bradford's paper on the *treatment of Pott's disease with the plaster-of-Paris jacket* is based on an experience of forty cases. Some were treated with a Taylor's brace, some with the plaster-of-Paris jacket, some by complete recumbency in a *gouttière de Bonnet.* Two children, who had worn plaster jackets for two weeks without discomfort, were attacked with dyspnœa so severely that it was necessary to remove the jacket. The disease in one case was in the upper dorsal region, and the child was wearing a jury-mast; in the other, the disease was in the middle dorsal region. The "dinner-pad" was used in both cases. In order to determine the effect of suspension, the following experiment was made: A portion of the spinal column, consisting of six dorsal vertebræ, was taken from an adult cadaver, including the muscles and ligaments. A short iron wire was fastened to the upper, and another to the lower vertebra. The upper wire was made fast to a hook, and to the lower a weight was attached. Two pins were driven into the bodies of two adjacent vertebræ, and the space between them was carefully measured. A weight of one hundred and ninety pounds, hung on the lower wire, caused no variation in the

distance between the pins. The cartilage between the two vertebræ was cut half through. When ten pounds were then applied, the space was increased one millimetre; forty pounds increased it to two millimetres; with one hundred and ninety pounds the increase was three millimetres. When the spine was bent back, a slight force was enough to separate the pins two millimetres. From this he concludes that, if the spinal column is straight and intact, it will sustain, practically, any amount of weight without permitting the bodies of the vertebræ to be pulled apart. He considers that the ideal position for fixation, in caries of the spine, is not with the spine straight, but, if possible, with the spine, above the point of disease, curved backward. His conclusions are: 1. Plaster jackets are efficient in Pott's disease when the caries is below the level of the middle of the scapula; 2. The efficiency is not due to fixation alone, but to fixation in an improved position. This improved position is usually obtained by suspension, but also in many cases by recumbency; 3. The treatment by the plaster jacket requires care in the application of the bandage. A poor plaster jacket will do harm, deceiving the patient and the physician.

14. Hemsted gives the following *method of applying the Plaster-of-paris jacket in spinal disease without the use of the extending apparatus.* The patient, stripped to about two inches below the hips, is placed on an ordinary strong dining-room table; a pillow is placed under the head; a jack- or round towel is placed under each armpit and fastened to the leg of the table opposite to the arm under which it passes, so that the two cross the chest. The head of the table is then raised until the plane of the table makes an angle of 45° with the floor In a few minutes the spine is straightened out, and any displacement of the vertebræ is reduced, when the bandage can be applied without hurry. The table should be covered with a blanket.

15. Adams believes the *plaster-of-Paris jacket in lateral curvature of the spine* to be useless and injurious. For practical purposes, he arranges cases of lateral curvature into three classes: 1. Physiological curves; 2. Commencing structural curves; 3. Confirmed structural curves. In the first class no mechanical treatment by any form of spinal support should be used, but reliance should be placed entirely on physiological means (gymnastics, etc.). In the second class mechanical support of some kind must be resorted to and continued during growth, in the hope of preventing increase and of obtaining some improvement in the deformity; but confirmed lateral curvature, whether slight or severe, is essentially incurable. The gain in height by suspension is quickly lost. The plaster-of-Paris jacket weakens the spinal muscles by constant use, and hinders gymnastic exercise; it restrains the respiratory movements, and prevents active exercise. He considers it an unnecessary restraint by night, and that it interferes with bathing and cleanliness. The poroplastic jacket is not open to these objections, and the author considers it a light and efficient support. In the discussion that followed, Mr. Bryant stated that he concurred with Mr. Adams, but would try physiological means longer than the author seemed to advocate. Mr. Owen had seen cases where support was worse than useless.

19. Rouse's patient with *osteo-arthritis of the hip* was a man aged forty-two. One year before admission, he was slightly wounded in his left foot; this was followed by considerable swelling, but the wound healed in three weeks. Eight months prior to his coming to the hospital the parts about the left hip-joint became swollen; an opening was made, and some watery matter was let out. The opening never closed, and from time to time there came from it a number of oval, flattened bodies. The left limb was wasted, inverted, and shortened an inch and a half. There was great

24. In Parker's *new method of excising the hip-joint*, an incision is made from the anterior superior spine of the ilium downward along the anterior margin of the great trochanter, cutting between the sartorius and rectus muscles on the inner side, and the tensor fasciæ and the borders of the two lesser glutei on the outer side. This exposes the anterior surface of the neck of the femur. The diseased bone is then sawn off *in situ* with a key-hole saw.

26. Macewen gives a case of *osteotomy for genu valgum, followed by death from diphtheria*. Opportunities for examining the condition of the parts after a recent osteotomy are rare. There have been but four fatal cases previously put on record. In this case a wedge-shaped piece of bone was removed with a chisel, antiseptically, from the inner condyle, just above the tubercle for the insertion of the tendon of the adductor magnus. The patient died on the ninth day. On examination of the parts, the superficial wound was found healed, and the ends of the fragments of bone were united by a firm plastic-like callus. There was no pus about the bone, nor had the joint been implicated.

28. Smith, in his lecture on *resection of the knee-joint*, showed three cases that are of interest from the fact that some years had elapsed since the operation. Case I was that of a man on whom the operation had been done four years before for anchylosis in a semiflexed position. He was discharged with a firm and strong limb. He had had good use of the limb, but it had lately become slightly bowed outward. He now had phthisis. Case II.—The joint was excised when the patient was eleven years of age (and he was now sixteen) for strumous disease of the bones. His general health was feeble, so that it was not until the end of two years that firm consolidation had taken place. He had had good use of the limb, and could walk ten miles. He now returned to the hospital with the limb bent forward, with a general sweep from the femur to the foot, forming an angle of forty-five degrees—not only a bend at the seat of resection, but a bending of the shaft of the bone. Osteotomy was done at the old point of resection, and he was discharged with a straight limb. Case III.—The joint was excised five years before, when he was about thirteen or fourteen years old. The shortening was now seven and a half inches. He was perfectly strong, and "could walk a dozen miles a day." The lower part of the leg and the upper part of the thigh were shapely, and compared very fairly with the other limb in size, but directly they came to the centers of growth it was obvious that there had been a complete arrest of growth. This was attributed partly to the disease, and partly to the operation having removed the epiphysis. There was some bending outward, for which Mr. Smith proposed to do an osteotomy. From these cases he drew the following conclusions: That knees, after successful resection, might be overtaxed by their owners, however firm the whole limb might be; and that resection should, if possible, be performed only in those cases where the whole process of growth and ossification of the limb was nearly accomplished.

30. Gant, speaking of *excision of the knee-joint*, draws attention to the fact that an excision is to be thought of at a comparatively earlier period than amputation, namely, before the supervention of marked constitutional disturbance or hectic. When such constitutional conditions coexist, it is often too late for excision. When, therefore, either operation becomes justifiable, no thought of the other should be entertained. While holding to this rule, he considered that there were exceptional cases, in which (anchylosis having failed) the question as to the choice of these operations might be discussed. Thus, in chronic joint-disease, whether synovitis or caries, when the patient has retained or regained sufficient vigor to undergo an operation entailing a long process of repair, the condition of the joint may permit of excision instead of amputation. Especially is this true if there exists a dislocation of the tibia backward, with retraction of the leg, for in these cases the limb can not be brought down without an operation; and it is worse than useless in its flexed condition. Such a case was admitted into his ward. The disease dated from childhood. The knee-joint was excised, and this resulted in a straight and useful limb.

50. A discussion on *bone-setting* took place at a meeting of the Clinical Society of London. A man of fifty years had dislocated his shoulder. This was reduced, and the arm was bandaged to the side. Nine weeks later he came to London for advice. The limb was so stiff that he could not move his elbow more than an inch in any direction, and any movement was accompanied by great suffering. He had a constant aching from the shoulder to the elbow. There was no heat or swelling about the shoulder-joint. He was anæsthetized, and the joint was moved by a series of short jerks through all its normal range of movements. Numerous adhesions about the joint were felt to give way. After recovery, he lost all the pain, and motion of the arm was normal, except in an upward direction. Two weeks later the operation was repeated, and since then he had been free from pain, and had full use of the limb. Marsh also reported the case of a man aged twenty-four, whose ankle was sprained. This was followed by great pain and swelling about the instep. Eight months afterward he came for treatment. The joint was still swollen and painful when used. There was no unnatural heat about it, but, on the contrary, the skin was blue and shining, and the foot was cold. There was a brawny swelling obscuring the outline of the joint. He was placed under the influence of an anæsthetic, and the ankle-joint was freely moved. Numerous adhesions were felt to give way. Within an hour he could walk freely, and the next day he walked quite a distance without any discomfort. A third patient could not bear her weight on her ankle nine months after a sprain. The joint was freely moved, and the symptoms disappeared. The fourth patient, a boy aged seventeen, was reported to have had hip-disease. The limb was flexed, abducted, and rotated outward; there was deep-seated pain at the back of the joint on any movement, and tenderness on pressure. There was an absence of any swelling. On examination, the joint was found to be sound; periostitis of the innominate bone, beneath the external rotators, was suspected. Three months later he was taken to a bone-setter, who freely moved the limb. After this he lost all pain, and was able to go about. Reference was made to the fact that these cases were of the class of which the professional bone-setter made his reputation, and the inability to use the limb was due to inflammatory adhesion outside the joint. Marsh lays down the following rule: that when joints, after injury, have remained stiff, "weak," and painful, and yet free from abnormal heat, beyond the usual period of convalescence; when there is no history of previous disease; and when careful questioning can elicit no history of any previous diathesis, such as scrofula or severe rheumatism—the patient should be put under an anæsthetic, and the limb should be carried in all directions through its full range of movement.

Miscellany.

THE METASTASES OF TUMORS WITHIN THE SEROUS CHANNELS OF THE NERVOUS SYSTEM, ESPECIALLY IN THE ARACHNOIDAL FRINGES.—Dr. Axel Key begins his article ("Nordiskt Medecinskt Arkiv," Bd. xi, Nos. 15, 20, and 29), by demonstrating the existence of special serous channels throughout the entire nervous system, peripheral and central, which are in intimate and uninterrupted communication with each other. A particle of liquid may be transported to the central organs exclusively by these channels in the nervous system, as far as the finest branches of the peripheral nerves. It may be carried not only to these surfaces, but also to the internal parts of the brain and spinal cord. Furthermore, these canals may serve as channels in the contrary direction, from the central organs to the periphery. In the same manner morbid germs, as, for example, infectious matters, especially in a liquid state or when finely divided, may be carried throughout the whole or the greater part of the nervous system, and there produce their injurious effects at very different points, without ever leaving the nervous system. If it is a fact that the serous channels of the peripheral system are relatively narrow, it is also a fact that these little cells are still small enough to be carried and dispersed over an area more or less extensive. The author admits that the local reappearance, often so obstinate, as well as the multiple appearance of certain tumors, like myxomata, neuromata, etc., more or less extensively throughout the peripheral nervous system, or the metastasis of these tumors from the peripheral system to the central system, and *vice versa*, is due to the dispersion of a cellular *seminium* through the serous channels of the nervous system. A cellular *seminium*, however, may be carried through the serous pericerebral and perispinal space, into the subdural and subarachnoidal spaces with much greater facility than through the peripheral nervous spaces. What occurs here may be compared to what occurs in a serous cavity, like the abdominal. In a cancer of the stomach, which has involved the peritoneal coat, we often meet with a multiple cancerous infiltration into the peritonæum. This affection then appears, as a rule, first and with a maximum of intensity in the deepest and most distant parts of the abdominal cavity, or in the folds of the peritonæum; and this is without doubt due to the circumstance that a cellular *seminium*, having entered the serous liquid of the abdominal cavity, descends by gravity into the folds or is arrested by them, and there remains, giving rise to metastases. Those points where, from physical circumstances, the *seminium* is most easily retained, and where the metastases most readily occur, the author regards as points of retention or arrest of the *seminium*. He now examines more carefully the subdural and subarachnoidal spaces, and gives a *résumé* of the nature of these spaces from his own investigations and those of Retzius. Moreover, he endeavors to determine whether there exist in these spaces special points, which *a priori* may be regarded as points of retention. He asserts that in these spaces not only may a *seminium* be easily carried to any point on the surface of the brain and spinal cord, but that from the subarachnoidal space such a germ may be introduced, through the channels of the pia and of the perivascular sheaths containing these channels to the entering vessels, into any point in the interior of the central organs, and there produce metastases. By one of the three openings of the fourth ventricle a germ may be introduced from the subarachnoidal space to the fourth ventricle, thence into the general ventricular system, and be deposited at some point on the walls, probably at the bottom of the ventricle. Such a germ may also be introduced directly from the subarachnoidal space into the velum interpositum, and there remain, or it may pass from there by means of the channels of the pia into the neighboring parts of the brain.

A germ which has reached the external cerebro-spinal spaces, especially the subarachnoidal space, would tend toward the deeper parts, as it does in the abdominal cavity, that is, to the base of the brain or to the bottom of the spinal canal. As special points of retention, the author designates the points of emergence of the nerves from the cranial and spinal cavities, and also the arachnoidal fringes. Each nerve, as the author and Retzius have shown, receives at its emergence an external sheath coming from the dura, and an internal sheath coming from the arachnoid. In these sheaths, the cerebro-spinal spaces are continued into the serous channels of the nerves themselves. For example, in the optic nerve these spaces are continued perfectly distinct and with a considerable capacity as far as the eyeball. It is often found that injected fluids are arrested precisely at the holes in the cranial bones through which the nerves make their exit, and in the spinal nerves in the intervertebral canals, at the commencement of the ganglia. A germ carried by a circulating fluid from the cerebro-spinal centers into the nerves would easily be arrested at these same points, and produce metastases. As regards the arachnoidal fringes as points of retention, from experiments with injection of fluids and methods of pressure, the author and Retzius admit that these physiological formations, met with in children and animals, and hitherto but imperfectly understood, are very important organs, which serve as a medium of communication between the serous cerebro-spinal spaces and the veins and venous sinuses of the dura, around which they are grouped. If, then, they possess this function, they might easily constitute points of retention for germs floating in the cerebro-spinal liquid. To explain this rôle of the arachnoidal fringes, the author gives a description of their structure, illustrated by drawings, and he draws special attention to their extent, as proven by the investigations of himself and Retzius, which is much greater than had hitherto been supposed. From the results of these investigations, he thinks that the fringes in the middle fossa of the skull would be especially exposed to the formation of metastases.

Rapid Amyloid Degeneration.—Dr. M. V. Odenius ("Nordiskt Medecinskt Arkiv," Bd. xi, No. 25) relates the case of a man aged twenty-one years, and in apparently perfect health, who received an injury of the knee, which was accompanied by considerable loss of blood, and had ended in perforation of the synovial membrane. When he entered the hospital at Lund, some time after the accident, he was excessively emaciated. On the inner aspect of the right knee there was a large wound communicating with the joint; and in the popliteal space a large fluctuating abscess, which, on being opened, gave exit to a great quantity of fetid pus. The patient died two months after the accident. At the autopsy there were found extensive destruction of the articular cartilages, caries of the bones, and large abscesses around the femur and along the tibia. In the kidneys there was amyloid degeneration of a portion of the glomeruli and of their afferent vessels. The same degeneration was found in the small arteries of the spleen and the parts adjoining. The other organs also showed traces of similar disease.

The Nerve-Cells of the Cerebro-Spinal Ganglia.—Dr. Gustav Retzius ("Nordiskt Medecinskt Arkiv," Bd. xi, No. 31) gives an epitome of previous researches into the prolongations of the nerve-cells of the spinal ganglia, and of the opinions formulated in regard to these prolongations. He then describes some recent investigations of his own, made upon the nerve-tubes of the cells in question in the frog, the cock, the rat, the rabbit, the cat, the dog, and man. He found in the spinal ganglia of all these animals numerous subdivisions of the myeline nerve-tubes; the nerve-cells never showed more than one process, which became a myeline nerve-tube. He succeeded in several cases in following this tube as far as a division exactly of the same kind as the other divisions of the nerve-tubes, in man as well as in all the other animals mentioned. He examined numbers of the ganglia of the cranial nerves, but the present researches include the ganglion of Gasser and the ganglion of the vagus, in which he has found the same relations of the parts as in the spinal ganglia.

Resection of Ribs in Chronic Empyema.—Although, says Dr. J. A. Estlander ("Nordiskt Medecinskt Arkiv," Bd. xi, No. 25), antiseptic surgery has rendered great service in the treatment of empyema, there are many cases in which the suppuration is prolonged indefinitely in spite of antiseptic lotions, and finally causes the death of the patient by amyloid degeneration of the kidneys. In these fatal cases there are no adhesions between the lung and the thoracic wall, so that the former may collapse completely, and thus cause a cavity in the pleura which can not possibly be filled up, because the ribs can not retract sufficiently. In fact, in ordinary cases, the retraction of the thickened pleura, which is thrown into folds by the tension of the muscles of the thoracic walls, diminishes the suppurating cavity little by little until it finally disappears. The ribs ought to follow this movement, and the consecutive deformities prove that this has taken place; but, if the cavity is too great, neither the retraction of the pleura nor that of the bony wall will suffice to approximate the thoracic walls to the lung, which is compressed against the vertebral column at the bottom of the cavity. For such cases Estlander proposes the resection of several ribs, from three to six, and perhaps even more. But the disease must be chronic and the pleura very much thickened, so as to admit of its retracting energetically, since the resistance of the ribs has been diminished by the operation. The point to be chosen is the part of the chest immediately beneath the axilla, as there are no large muscles here; if there is a fistula here, it may serve as a basis of operation; if not, a counter-puncture must be made. Ordinarily, Estlander makes transverse incisions corresponding to the intercostal spaces; a single incision sometimes suffices to expose two and even three ribs, and complete the operation. The resections are of course subperiosteal; and all the steps of the operation and subsequent dressing are to be carried out by antiseptic methods. He has removed pieces from three to six cm. long. A bad general condition of the patient is no contraindication against the operation. He gives the histories of six cases, five of which ended in complete recovery.

Preamble and Resolutions upon the Death of Dr. Charles M. Allin.—The Board of Directors of the New York Eye and Ear Infirmary have heard with regret the announcement of the death of Dr. Charles M. Allin. His relations to the Infirmary began in 1852, when, for two years, he did duty as surgeon. He removed from the city, and was not again connected with the institution until 1865, when, for three years, he acted as assistant surgeon, and in 1868 he was made surgeon and also entered the Board of Directors as director *ex officio*. In 1869 he was appointed Secretary to the Board, and in 1875 he resigned his position as surgeon. The Board then chose him to be a Director, that he might legally retain his office as secretary, and in 1876 he was made consulting surgeon. In 1879 he was compelled by the illness which ultimately terminated his life to retire from the position of secretary, which he had held with great acceptance for ten years. At the time of his decease he remained one of the Consulting Surgeons and also a Director of the institution. Dr. Allin has thus fulfilled duties in the Eye and Ear Infirmary of an important character for eighteen years. It was characteristic of him to be prompt, exact, careful, and cheerful in all his work. He fulfilled to the utmost his duty to the patients under his care, and in his office as Secretary he was painstaking and precise. His courtesy and affable demeanor made his presence always welcome, and his intelligence rendered his opinions valuable. The Board therefore unite in the following resolutions: *Resolved:* That the Directors express their sincere grief at the death of their late associate, Dr. Charles M. Allin, who has been taken away in the prime of life from most useful activity in this institution. They hereby record their sense of his worth and charm as a man, of his skill as a surgeon, and of his efficiency as a director and secretary to this Board. They recognize the debt which the institution owes to his long and laborious and faithful services. *Resolved:* That the Board respectfully offer to his family the assurance of their true sympathy and that they share in their bereavement. *Resolved:* That a copy of these resolutions be sent to the family of Dr. Allin, after being duly attested by the Secretary and President, and be recorded on the minutes.

Benjamin H. Field, Vice-President.
Richard H. Derby, Secretary.

Army Intelligence.—*Official List of Changes of Stations and Duties of Officers of the Medical Department of the United States Army from June 14, 1880, to July 13, 1880.*—The following promotions and appointments are published: Lieutenant Colonel W. S. King to be Surgeon with the rank of Colonel; Major John E. Summers to be Surgeon with the rank of Lieutenant Colonel; Assistant Surgeons William E. Waters, Edwin Bentley, George A. Otis, and George P. Jaquett to be Surgeons with the rank of Major; Rudolph G. Ebert, of Oregon, Robert J. Gibson, of Connecticut, Robert B. Benham, of Pennsylvania, William C. Gorgas, of Alabama, Norton Strong, of Michigan, and Arthur W. Taylor, of New York, to be Assistant Surgeons, U. S. A. ═══ Byrne, C. C., Major and Surgeon. Assigned to duty as Post Surgeon at Angel Island, California, relieving Assistant Surgeon Hubbard. S. O. 93, Division of the Pacific and Department of California, July 1, 1880. ═══ Hubbard, Van B., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Alcatraz Island, California. S. O. 93, C. S., Division of the Pacific and Department of California. ═══ Brewer, J. W., Captain and Assistant Surgeon. His leave of absence on account of sickness still further extended three months on Surgeon's certificate of disability. S. O. 142, A. G. O., June 28, 1880. ═══ Bartholf, J. H., Captain and Assistant Surgeon. Assigned to duty at Fort Cœur d'Alene, Idaho Territory. S. O. 103, Department of the Columbia, June 19, 1880. ═══ Cronkhite, H. M., Captain and Assistant Surgeon. Granted leave of absence for two months. S. O. 134, A. G. O., June 18, 1880. ═══ Winne, C. K., Captain and Assistant Surgeon. To report in person to Commanding General, Department of the East, for assignment to duty. S. O. 148, A. G. O., July 6, 1880. ═══ De Loffre, A. A., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at camp on White River, Colorado. S. O. 144, Department of the Missouri, July 5, 1880. ═══ Comegys, E. T., Captain and Assistant Surgeon. Relieved from duty in Department of Texas to proceed to Cincinnati, Ohio, and report arrival there, by letter, to the Surgeon General. S. O. 148, C. S., A. G. O. ——— The following-named Assistant Surgeons, recently appointed, will report in person to the Commanding Generals of the Departments set opposite their respective names: R. G. Ebert, Department of the Columbia; R. J. Gibson, Department of the Missouri; R. B. Benham, Department of Dakota; W. C. Gorgas, Department of Texas; Norton Strong, Department of the Platte; A. W. Taylor, Department of the Missouri. S. O. 149, A. G. O., July 7, 1880.

United States Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the Marine-Hospital Service of the United States. April 1, 1880, to June 30, 1880.*—Bailhache, P. H., Surgeon. Detailed as Chairman of Board for the physical examination of officers of the Revenue Marine Service, April 28, 1880. Detailed as Chairman of Board for the physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 21, 1880. Detailed as medical officer of Revenue bark Chase during practice cruise, June 1, 1880. ——— Miller, T. W., Surgeon. Detailed as Chairman of Board of Examiners to convene in New York, June 21, 1880. June 4, 1880. ——— Long, W. H., Surgeon. Granted leave of absence for ten days, from April 16, 1880. April 14, 1880. Detailed as member of board to select a site for a Marine Hospital at Memphis, Tennessee, May 12, 1880. ——— Fessenden, C. S. D., Surgeon. Detailed as member of Board of Examiners to convene in New York, June 21, 1880. June 4, 1880. Granted leave of absence for eight days from June 13, 1880. June 9, 1880. ——— Sawtelle, H. W., Surgeon. Detailed as recorder of board to select a site for a Marine Hospital at Memphis, Tennessee, May 12, 1880. ——— Doering, E. J., Surgeon. Detailed as recorder of Board of Examiners to convene in New York, June 21, 1880. June 4, 1880. ——— Fisher, J. C., Passed Assistant Surgeon. Granted leave of absence for thirty days from May 6, 1880. April 21, 1880. Detailed as recorder of board for the physical examination of officers of the Revenue Marine Service, April 28, 1880. ——— Godfrey, John, Assistant Surgeon. To report to Board of Examiners for examination for promotion. June 4, 1880. ——— Brown, F. H., Assistant Surgeon. To act as inspector of unserviceable hospital property at Boston, Massachusetts, April 18, 1880. To report to Board of Examiners for examination for promotion, June 4, 1880. ——— Goldsborough, C. B., Assistant Surgeon. Detailed as recorder of board for the physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 21, 1880. ——— Keyes, H. M., Assistant Surgeon. To act as inspector of unserviceable hospital property at St. Louis, Missouri, April 13, 1880. ——— Mead, F. W., Assistant Surgeon. To act as inspector of unserviceable hospital property at San Francisco, California, April 19, 1880. ——— Porter, F. D., Assistant Surgeon. Granted leave of absence for fourteen days from July 2, 1880. June 29, 1880. ——— *Promotion.*—Fisher, J. C., Passed Assistant Surgeon. Promoted to be Passed Assistant Surgeon, April 2, 1880.

THE

NEW YORK

MEDICAL JOURNAL.

SEPTEMBER, 1880.

Original Communications.

ON PROLAPSUS ANI.*

BY W. H. VAN BUREN, M. D., LL. D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY, DISEASES OF THE GENITO-URINARY SYSTEM, AND CLINICAL SURGERY, IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

Prolapsus ani—"prolapse," "falling," or "descent" of the lower bowel—is the name given to a disease of quite common occurrence, and sometimes of much gravity. It is also spoken of as *procidentia recti;* and in dispensary practice a mother will often present her child with the complaint that "its body comes down." I have already spoken of one variety of this ailment, in which the mucous membrane of the lower rectum, dragged down by internal hæmorrhoidal tumors which have grown upon it, protrudes from the anus like the lining of a coat-sleeve projecting beyond its cuff.

From the different names applied to *prolapsus ani*—the title under which the disease is most frequently treated of in text-books of surgery—you will infer, and correctly, that it presents itself in several varieties; and there is also, in truth, as much vagueness in the knowledge of this malady, in its various forms, as in the terms applied to it. As it is a source of great physical suffering, not rarely of fatal consequences and complications, and attended, in some of its forms, by great difficulty in diagnosis, we shall examine somewhat closely into its causes and nature.

---

* **Extracted from Professor VAN BUREN's forthcoming work on "Diseases of the Rectum." New York: D. Appleton & Co.**

In all cases of prolapse there is a protrusion through the ring of the anus, from within, of a soft scarlet or livid mass, covered externally by the mucous membrane of the intestine, and smeared with the tenacious mucus peculiar to the part, discolored by fecal matter, and sometimes streaked with blood. In a certain proportion of these cases, the protrusion consists of the mucous membrane, and nothing more; but in others it may include, also, the muscular coat of the bowel, its serous coat, and even other viscera.

Although similar in their clinical aspect, these protrusions may, therefore, present vitally important differences in their nature, and we must learn how to distinguish them. They are something more than a mere "falling down" or slipping out of the bowel through the ring of the sphincter, as the title would imply, being veritable extrusions effected by force from within; and this force is, mainly, an exaggeration of the extrusive function of the intestine, aided by the action of the abdominal muscles and by gravity.

You will probably meet with this disease more frequently in children, in whom the undeveloped os sacrum presents less of a concavity than in the adult for the support of the lower bowel, and who are liable to violent and uncontrollable fits of straining from slight causes. In the adult it is often a complication of advanced stricture of the urethra, the act of straining to make water favoring the descent of the bowel; and it frequently accompanies stone in the bladder, at all periods of life. In the old man, it is favored by the presence of an enlarged prostate, the bulging of which into the bowel deceives him into frequent efforts at stool; and here also the increasing laxity of the parts promotes the descent. In children of weak mind, and in lunatics, prolapse is especially liable to attain large proportions.

Like *hernia* and *procidentia uteri*, the protrusion of the lower bowel tends continually, if unrelieved, to increase in volume; and sometimes, when of long standing, it reaches an enormous size.*

It is, therefore, a malady which it is desirable to check in its earliest stages. An old stricture patient in the adjoining hospital had a prolapse which measured seven inches in length, and four and a half inches in diameter at the anus—the orifice of which was proportionately distended. It came down in full volume whenever he strained in the attitude of squatting; in urinating in the upright position, however, by keeping his thighs approximated closely, and his perineal muscles contracted by special effort of the will, he could prevent any protrusion, his stricture having been measurably relieved. His sphincter ani was unreliable from frequent over-distention; it was in a state of permanent gaping and dilatation from atony, and also diminished in volume by atrophy. This enormous tumor was conical in shape, with its base at the anus, and presenting at its apex an opening through which the finger passed readily its whole length; and, when grasped between it and the thumb, the impression was clear upon the mind that all the coats of the rectum were present in the tumor—the fibrous and muscular coats, as well as mucous membrane—and that the tumor, as was evident also from its measurement, comprised not only the whole length of the rectum, but in addition several inches of the colon. In the dissection of a similar tumor, Mr. Quekett, of London, found not only all of the proper coats of the lower rectum, but also a good deal of peritonæum. This, then, is the distinguishing characteristic of true prolapsus of the rectum: that it is liable to involve the whole thickness of the walls of the gut, and is not confined to mucous membrane alone, dragged away from the muscular coat through yielding of the lax connective tissue between them, as in the slighter degree of prolapse already described as liable to complicate internal hæmorrhoids.

---

* Bryant speaks of a "foot of entire bowel" ("Manual," etc., Philadelphia, 1879), and Fabricius ab Aquapendente describes a falling of the bowel as long as the forearm, and double its volume (Cruveilhier, "Traité d'Anatomie Pathologique énérale," Paris, 1849, vol. i, p. 550). Nélaton mentions a case in which twenty-e and a half inches of gut protruded. Professor D. H. Agnew attended a lady ninety-seven, with fracture of the thigh, in whom an enormous protrusion took lace. It was a complete invagination of the entire *rectum* and a portion of the olon, and measured at least twelve inches in length ("Princ. and Prac. of Surery," Philadelphia, 1878, vol. i, p. 422).

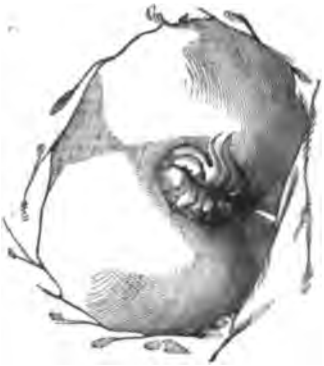


FIG. 1.—Partial Prolapse, consisting of Mucous Membrane alone. (Bryant.)

In Fig. 1, the simple prolapse of mucous membrane is represented. It is a circular or oval reddish mass, like a rosette, with an irregularly wrinkled or puckered surface, and its wrinkles or folds *radiate*, in a general way, from the center of the anus.

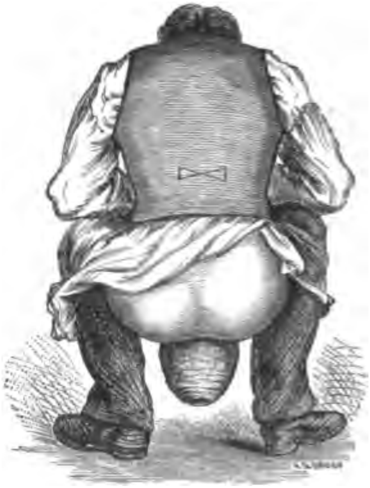


FIG. 2.—Complete Prolapse, comprising all the Coats of the Gut.

In Fig. 2 the whole rectum, together with a portion of the sigmoid flexure of the colon, has been doubled upon itself and forced through the anus. The tumor is bulky, solid, and distinctly conical in shape, and its folds are deeper and *uniformly transverse.*

American systematic writers designate the form of protrusion represented in Fig. 1 as "partial," and that shown in Fig. 2 as "complete" prolapse. These terms certainly facilitate description, and I gladly adopt them.* The latest French authorities recognize two varieties of the disease: *prolapse of the mucous membrane alone*, and *prolapse with invagination*, the latter containing all the coats of the gut, a division which covers the same ground. English writers do not generally recognize this distinction, or at least do not define it clearly, and there is, therefore, not a little confusion in their description of this malady; in fact, there are few subjects more obscurely treated by most of the older authors, and concerning which you will meet with less full and precise information in your text-books. This is my apology for bringing before you certain details which are required for a more thorough knowledge of the subject; for it is no easy task to distinguish a simple protrusion of the mucous membrane from a falling of the whole bowel, no matter what you may hear to the contrary. Concerning the last-mentioned form of protrusion, the "complete," I am especially anxious to impress you with the fact that there is always more or less of the peritoneal sac carried down with the bowel, and necessarily present in the tumor. I have reliable information of a case in which the removal of a "complete" prolapse of long standing, in a child, was quite recently undertaken by a hospital surgeon of mature years. The protest of a junior colleague led the operator to pass some deep sutures, in deference to a fear expressed as to the probability of intestinal protrusion, but he was confident that the tumor consisted of mucous membrane alone, and proceeded to remove it. Notwithstanding the deep sutures, protrusion of several coils of small intestine did occur, and the child died, in collapse, within twenty-four hours. Criticism of such an operation as this could be met by citation of high authorities

---

* Many writers use the term "procidentia"—borrowed from uterine nomenclature—and some confine it to the larger and more complete rectal protrusions, reserving the term "prolapse" for the smaller; but there is a want of precision in these terms that can not be charged against "partial" and "complete," as here defined.

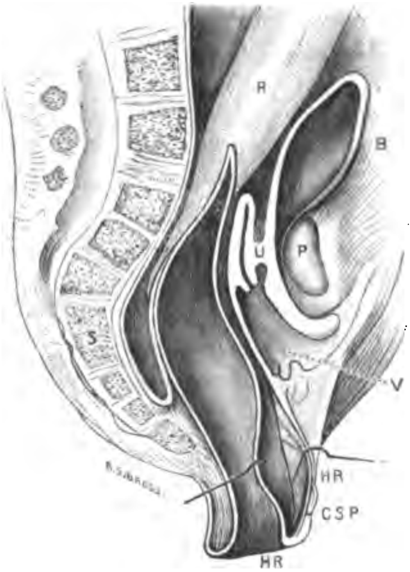


FIG. 3.—Complete Prolapse, with a Peritoneal Pouch, as shown in a Dissection of a Child. R, rectum; B, bladder; S, sacrum; P, pubes; U, uterus; V, vagina; H R, H R, the prolapse; C S P, the cavity of the peritoneal sac (displayed by hooks). (Cruveilhier.)

who have sanctioned it. But I trust it is not too much to say that this sanction has been based, certainly in avowed instances, upon a misconception which pathological anatomy offers us the means of removing, and that the whole subject should be reconsidered.*

* BOYER, who, up to the publication of Nélaton's "Surgery," was the great French surgical authority, fell into the strange error of denying that it is possible that the whole rectum can be displaced from its connections, and forced out through the anus—as in what we call the "complete" form of prolapse. He insists that all anal protrusions consist of mucous membrane alone, and that the external connections and attachments of the rectum render its extrusion in totality an impossibility; and he considers that this is proved by the recorded cases in which recovery has followed the sloughing of such tumors, and even their removal by the ligature or knife ("Traité des Maladies Chirurg.," fourth edition, Paris, 1831, vol. x, p. 89). Boyer quotes in confirmation of his belief a case recorded by the celebrated obstetrician Levret, of a woman with a livid, sanguinolent protrusion from the anus, of the size of a fist, in whom, when he introduced a finger into the vagina, he found

Partial prolapse, i. e., of mucous membrane alone, never attains a large size. A certain amount of protrusion of the inner coat of the bowel always takes place during defecation, normally, similar to what occurs in the horse, and "partial" prolapse is simply an exaggeration and persistence of this normal protrusion. It is to be recognized by its comparatively moderate size and its radiating folds. The tendency of this form of prolapse is to go up again into the bowel spontaneously; if it remains down, and is strangulated by the external sphincter, it may assume a congested or livid appearance, and become more or less infiltrated by œdema. If partial prolapse becomes chronic, i. e., if it comes down at every stool, and afterward returns spontaneously, or is put back, its tendency is, as I have already said, to grow larger; but *the increase of size is explained by the fact that the muscular coat of the bowel is now also being dragged down*, and when this occurs, the deeper transverse folds, due to contraction of the longitudinal muscular fiber of the bowel, will make their appearance upon the surface of the tumor, and mark the change in its character.

Clinically, partial prolapse, *in the adult*, is almost always caused, and of course complicated, by internal hæmorrhoidal tumors; and I have described this very common condition when speaking of the last-named affection.

that both this canal and the uterus were in their natural situation, which he, Levret, wrongly asserts could not possibly have been the case if the whole thickness of the rectum had escaped through the anus. Their countryman, Cruveilhier, one of the highest authorities in pathological anatomy, some years afterward fully exposed this singular error by dissection of the parts in the dead body of a patient with complete prolapse. His able exposition of this subject in his "Anat. Path. Générale," Paris, 1849, vol. i, p. 547, is still regarded as the best authority, and I regret that this work has never been translated into English. In the twenty-first *livraison* of his illustrations of pathological anatomy, Cruveilhier gives a plate of the vertical section of the pelvis of a female child between six and seven years old (Fig. 3), with a falling of the rectum of a moderate size, but containing all the coats of the bowel, in which the anterior reflexion of the peritonæum reaches the most depending point of the protrusion, the uterus and vagina retaining their normal position in the pelvis. He adds that this is *probably always the case* in falling of the rectum; and that "the connections between the gut and the vagina, in the female, and the bladder, in the male, always yield." An inspection of this plate will render it perfectly clear why the intestines are liable to protrude when a "complete" prolapse is removed by the knife.

When uncomplicated (and it is encountered in this form most frequently in children), partial prolapse is the result of straining provoked by dysentery, teething, ascarides, or, in rarer cases, by the presence of a rectal polypus. The habit of leaving a child sitting for a long time upon a chamber vessel promotes it. When neglected, it results inevitably in dragging down of the remaining coats of the bowel, and this condition we will next consider.

Of *complete prolapse*, in which the whole thickness of the bowel is included, there are three distinct varieties, each of which the well-informed surgeon should be able to distinguish:

First. The most common form, in which the greased finger, passed carefully around the base of the tumor, recognizes that its external surface is absolutely continuous with the membrane that lines the orifice of the anus, without the existence of a sulcus. Here the bowel began to slip out, originally, by its very lowermost portion, and this has gradually formed the outer layer of the protrusion, the gut, as it is forced down from above, passing within it. This form of complete prolapse follows simple protrusion of the mucous membrane, or partial prolapse, when the latter has been neglected; it results from a persistence of the causes which are keeping up the latter, and effecting its gradual increase by dragging upon the outer coats of the gut, when the sub-mucous connective tissue will no longer yield. Such a tumor always contains more or less peritonæum, and it is important that you should never lose sight of this fact. The peritonæum, you will remember, surrounds the rectum on all sides, and extends downward to an oblique line three and a half inches from the anus in front, and scarcely five behind. The peritoneal reflection at the base of a protrusion of this kind is, therefore, always larger in front. Esmarch says that, when prolapse is extensive, a pouch of peritonæum is formed by the anterior wall, in which a coil of small intestine, or the bladder, or even the ovary, may be lodged.

Second. Where the finger can be inserted into a groove alongside of the base of the tumor, so as to recognize a distinct sulcus of more or less depth, at the bottom of which, if not too deep, the lining membrane of the gut can be felt as it is reflected from the base of the protruding tumor. In this case the rectum has begun to fold upon itself (in other words, to become *invaginated*, or, in the language of the day, "telescoped," the upper part of the bowel always passing *within* the lower), at a point more or less distant from the anus, yet generally within the reach of the finger.

Third. In this variety the finger can be inserted through the anus alongside of the protruding tumor, but can not reach any line of reflexion of the mucous membrane of the rectum upon the tumor; the latter, in fact, may not even as yet have protruded externally through the anus, but may be felt only as a sort of polypoid mass occupying the cavity of the rectum. Here *invagination* has taken place higher up in the colon, has possibly commenced in the cæcum, or even in the lower part of the ileum, which, sucked in through the ileocæcal valve, has been carried with the cæcum itself up the ascending colon; and, the connecting attachments gradually yielding, the invaginated mass has been propelled along the whole length of the colon, finally presents itself in the rectum, or may be, possibly, protruded externally. This almost incredible displacement of parts has now been certainly recognized in so many recorded cases examined after death that it would be inexcusable to fail to recognize it during life. Fig. 4 represents the invagination, and the mass occupying the rectum, as found in the dead body.

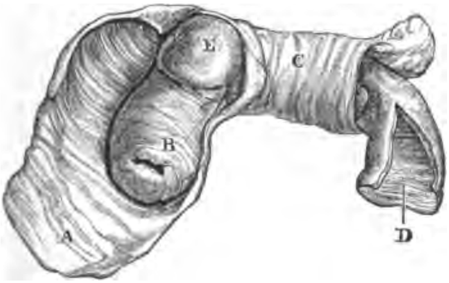


Fig. 4.—A, rectum laid open; B, natural opening of intussuscepted ileum; C, colon; D, ileum, upper portion; E, invaginated ileum. (Bryant.)

It is obvious that these three varieties of complete prolapse are simply examples of the same affection, differing only in degree; and that the essential cause of the affection is the tendency—which may develop itself in any part of the intestinal canal—of the bowel to become inverted, "invaginated," or "telescoped" into itself. This remark does not apply strictly to the first variety of complete prolapse, in which the lowermost part of the rectum slips out through the anus in the beginning, and the rest is forced to follow it; but here also, as in the other varieties, the mechanism is identical, for it is the vermicular contraction of the muscular coat of the intestines which mainly produces the displacement in all invaginations.

Complete prolapse is evidently a more serious affection than the *partial* form of the disease; and the last of the three varieties described, inasmuch as it involves chronic and generally extensive invagination, is, sooner or later, almost of necessity fatal. There is no recorded instance in which the invagination, after it has reached the rectum, has been permanently drawn out and reduced, except by the intervention of art; there are cases in which it has become hopelessly strangulated and has sloughed, portions of the intestinal tube having been voided *per anum*, with apparent temporary recovery; and there is at least one instance in which such a rectal protrusion was removed by ligature, under the idea that it was a polypus, and recovery is said to have followed.*

---

* The elder MONRO, in 1755 ("Edinburgh Med. and Phys. Essays," vol. ii, p. 386), describes very clearly and ably a case of prolapse in a healthy boy of eighteen months, protruding four inches from the anus, which he and Mr. Drummond, the surgeon in charge, failed to reduce. It could be readily forced back into the rectum, and forced up as far as a long finger could reach, but persistently redescended. An orifice at the lowermost extremity of the protruded gut, into which the tip of the finger could be inserted, and which, Monro says, resembled "the feel of the *os tincæ* of an impregnated womb," clearly proved that the gut was "inverted." The child died in a few days, and it was found, on opening the body, that the "inversion began a little below the upper part of the sigmoid flexure of the colon, and that the meso-colon was torn away from the inverted part." In the same paper Monro gives four cases of death from intussusception, in which the bodies were opened: two women, of middle age, and two children, of seven and twelve. These cases had lasted from six months to two years before causing death. One of them was in the arch of the colon, seven inches long; another in the sigmoid flexure, four inches long; and in a third the ileum "was raised twelve inches within the colon, and also the valve, the appendix, and the caput coli."

You will be gratified to learn that this, the gravest form of prolapse—which, in fact, is not generally included in the

In the fourth case, reported to him by Cullen, the boy (twelve years old) voided *per anum* a portion of ileum thirteen inches long, nearly a year after his symptoms began, and survived the separation six weeks, during which he voided potato skins which had been recently eaten, showing that the continuity of the intestine had been reëstablished. Monro remarks, "'Tis surprising that the people in the preceding histories lived so long." But this is explained by another remark: "There was a narrow passage for the fæces found in all of them"; that is, complete strangulation and consequent obstruction had not taken place in any of them.

Mr. Hutchinson, of the London Hospital, has published ("Med.-Chir. Trans." vol. lix, p. 31, 1873), in connection with the case of a child with an apparently strangulated prolapse from invagination, on which he had operated successfully by opening the abdomen, a table of one hundred and thirty-one cases, which he had caused to be collected from all sources, in which the invaginated mass of bowel had reached the rectum, and could be seen protruding externally, or felt by inspection or exploration of the lower bowel; and in about twenty per cent. of these cases the invaginated mass protruded from the anus as a prolapse, as in his case. This gives an idea of the frequency of the third variety of complete prolapse.

As evidence of its great mortality, we find in this table no other case besides his own saved by surgical art. In a small proportion of the cases, the invaginated mass, becoming strangulated sooner or later, fell into gangrene, and separated by sloughing, as in the boy whose case was reported by Cullen to Monro. An instance is reported by Dr. Daniel Choate, of Merricksville, Canada ("Amer. Jour. of Med. Sci.," April, 1841, p. 533), of sloughing of an invaginated portion of colon, including the caput coli and appendix, ten inches long, during an attack of so-called dysentery. He found the patient—an Irish laborer who lived eighteen miles away, in the woods—with a falling of the bowel of the size of his fist, and, after reducing this, his attention was directed by the man's wife to "something" he had passed from the bowels shortly before, which she had preserved in a basin of water, and which proved, on examination, to be the portion of colon above described. The man "got well." A mass voided at stool by a woman, after an attack of "bowel complaint," which she survived, was sent to me in 1857 by the late Dr. Wales, of Rondout, N. Y. It proved to be small intestine, and measured no less than five feet: it was ileum, for the *glandulæ agminatæ* were distinctly recognized by Dr. Isaacs.

It is especially noticeable that, in these cases of prolapse with invagination, so large a proportion of them have begun by sucking in of the lower end of the ileum through the ileo-cæcal valve, and the subsequent inversion of the cæcum itself into the ascending colon, and thence onward to the rectum, and many of them to actual prolapse. This was the case in the child saved by Hutchinson, in whom the protrusion from the anus is thus described: it "was about two inches long, deeply congested, and much swollen. By the side of it the finger could be passed its full length into the rectum without reaching the point at which the intussusception began." *He was able, on carefully examining the extremity of the* category of rectal diseases, being treated of under the head of invaginations—has been recently proved to be curable by

protruded part, "*to identify the pouch and valve of the cæcum, with the opening into the ileum.*" As illustrating the length of time during which invagination may exist before fatal strangulation or obstruction comes on, I will mention a case reported by Dr. Worthington ("Am. Jour. Med. Sci.," January, 1849, p. 97), of a child three years old and some months, who died, apparently of diarrhœa, with protrusion of the bowel at the anus, after an acute illness of six weeks, in whom intestinal symptoms had existed for two years. On *post-mortem* examination, the intussusception was found to involve the lower end of the ileum, with the cæcum. This form of intussusception may be present and progressing, in the absence apparently of serious symptoms, as in the case of Mr. Sidney Jones ("Trans. Path. Soc., Lond."), in which a child under two years of age lived nine weeks after an invagination which had traveled through the entire length of the colon (evidently also ileo-cæcal), and protruded six inches from the anus. After the first severe symptoms the child had free action of the bowels, took the breast well, and ceased to vomit. Death was finally caused by exhaustion from straining, and by the slowly progressing gangrene of the extruded portion. It is worthy of notice that, in this case, the serous surfaces of the invaginated bowel were firmly adherent. Absence of peritonitis and of adhesions in these cases would seem to be the rule, and yet, in neglected cases, peritonitis may be a cause of the fatal termination, as in the interesting example related by Dr. Hilton Fagge in his excellent paper on intestinal obstruction ("Guy's Hospital Rep.," vol. xiv, 1869, p. 272). A woman of thirty-five, with a complete prolapse protruding several inches, which she had concealed for a long time, had finally symptoms of strangulation, and entered Guy's Hospital under Mr. Cock. The prolapse could be reduced, but this did not overcome the strangulation. She refused to submit to any operation, and died of acute peritonitis. Dr. Wilks found, on examining the body, an intussusception in which it was calculated that the commencement of the entering layer was eighteen inches from the anus. The prolapsed mass, four and a half inches long, was sloughing; it was curved on itself by the dragging of the attachment of the meso-colon, so that the opening into it (Monro's *os tincæ*) was at some distance from its extremity. The foregoing examples will serve to show some of the different phases of prolapse with invagination, and its relations with the general category of intussusceptions. The case in which a mass of this nature was removed by ligature is recorded in the "Boston Medical and Surgical Journal," of July 6, 1876, in a letter from Florence, Italy, from Dr. Wilson: "N. N., native of Corsica, aged sixteen, emaciated, color of a dirty yellow, suggestive of malignant disease; has generally been healthy, and never suffered from any serious abdominal affection; no history of cancer in the family; has been ill a twelvemonth with constipation and painful defecation. Gradually he became conscious of some mechanical obstruction just within the anus, and then of a protrusion, which sometimes he could put back in place himself, and at other times would have to seek aid. Purgatives, taken to relieve constipation, produced discharges of scybala, blood, and mucus, followed by the appearance of the tumor after considerable straining; occasionally there was also discharge of a sero-mucous fluid. The more general opinion among his medical advisers was that the tumor was a surgical operation, heretofore regarded as unjustifiable. I will return to this subject shortly.

cancerous. The pain attending defecation had become so severe that he declined taking food. An operation was proposed, but objected to, and he determined to proceed to Florence for further advice.

"On the first examination a tumor was discovered blocking up the rectum, which the patient could generally protrude, but which he failed to do on the present occasion. A dose of castor-oil was given, which effected this object; it was then discovered to be movable, showing that it was unconnected with the deeper structures of the rectum. The finger could pass freely round its circumference, where there was space for the escape of the fæces. The surface of the tumor was irregular from the presence of vegetations, and no aperture of any kind was detected; it was considered to be a cancroid, and later a polypus. During a subsequent examination a portion was detached from the surface, and, on submitting it to the microscope, it was ascertained or rather held to be a papilloma, but the surgeon was unconvinced, and adhered to his first impression that it was a polypus. The general appearance of the patient was anæmic, from loss of blood, suffering, and defective nourishment. After sundry consultations, an operation was proposed as the only chance of salvation, and agreed to by the sufferer. A full dose of castor-oil was administered, which produced a copious discharge of fæcal matter and complete protrusion of the tumor. The patient was placed on an operating-table. On applying a wire ligature to prevent hæmorrhage, it was found that the point of origin of the polypus could not be reached, as the peduncle was evidently a long one. It was, however, applied as high up as practicable. The extreme ends of the metallic ligature were securely fixed to the handles of the instrument; the tumor was drawn down, and excised by the galvano-caustic wire at a short distance from the point of ligature. This apparently simple operation was followed by unusual results, namely, shock, with its concomitant symptoms. The patient was hurried to bed, and the surgeon was surprised to find that his wire ligatures had almost vanished; that the handle of the instrument alone prevented their disappearance into the cavity of the abdomen. The tumor was now examined, and it was soon discovered, to the general astonishment and consternation, that the tumor was *not* a cancroid, *not* a polypus, *not* a papilloma, but the whole of the ileo-cæcal valve, with a portion of the ileum, in a considerably hypertrophied state, measuring, in its invaginated, telescopic condition, ten centimetres. The wires were now inclosed in glass tubes, and the patient left in repose, with a prognosis which may easily be imagined. After fourteen hours, evidences of strangulation manifested themselves, and it was determined to slacken the ligature, which was followed by a copious discharge of serous fluid, and a large quantity of fæcal matter, blood, and mucus. In a few hours there was a subsidence of all untoward symptoms. In a few days the bowels were opened naturally and regularly, which had not occurred for many months, and in a fortnight the patient announced and carried out his intention of returning to his native hills, where he now remains in perfect health."

The last remark probably assumes too much, as patients in whom any portion of the intestinal canal has been lost, as by sloughing, generally linger in poor health and die soon. Recovery, after loss of a considerable portion of intestine, *Diagnosis.*—The clinical features of *complete* prolapse need not detain us, for I have already touched upon them sufficiently; but I must ask you (in view of the great importance of correct diagnosis, as bearing upon selection of methods of cure) to keep *its three varieties* distinctly in view, namely, the first and most common, where there is no sulcus at its base, but pretty certainly a pouch of peritonæum within its substance; the second, where there is a sulcus, but the finger, when inserted, can readily touch the bottom of the groove; and third, where the finger can reach no line of reflexion, and the history of the case and palpation of the abdomen may complete a diagnosis of intussusception, com-

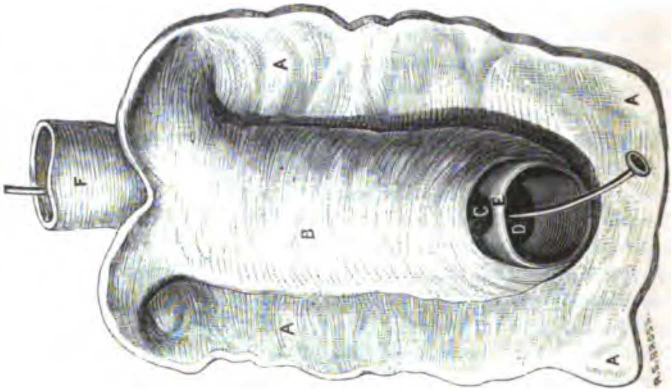


FIG. 5.—A, transverse colon, opened posteriorly; B, the invaginated mass, near eight inches long; C, orifice of the appendix vermiformis; D, orifice of the intestine (ileum), where the instrument enters; E, a sickle-shaped, sharp-edged fold—a border of the ileo-cæcal valve; F, section of the ileum, giving exit to the instrument. (Cruveilhier.)

as Dr. Hilton Fagge has shown, is at best but a reprieve, and a restoration of former health is not to be counted on. The reporter adds that "the preparation may be seen at the pathological museum of the Florence hospital." In 1867, Mr. T. Holmes removed a cylindrical tumor, which proved to be a mass of invaginated intestine, four inches in length, from the rectum of a man of thirty-seven, in St. George's Hospital. The nature of the tumor had been previously diagnosticated, mainly by an opening at its lower end, which could be reached and entered by the tip of the finger. It had existed for some weeks, and had already partially separated by sloughing. The patient did well for a day or two, and was evidently relieved by the operation, but died within a fortnight from pyæmia. (Abscesses were found in the lungs and liver.) A circular patch of ulceration, which nearly encircled the gut, was found in the sigmoid flexure, and this was supposed to have been the mark of its attachment ("Trans. Path. Soc., Lond.").

mencing high up in the canal. When two orifices can be distinguished at the extremity of a protrusion (that of the appendix vermiformis, as seen at C, Fig. 5, situated near the true opening of the intestine, but a little on one side, or even the "slit-like opening of the ileo-cæcal valve," said by Mr. Howard March to have been in sight in a case upon which he operated *), then the diagnosis of intussusception commencing at or near the caput coli is clear. In the case just mentioned the mass could be felt through the abdominal wall as high as the crest of the ilium, on the left side, and in other cases it has been recognized as a solid sausage-like tumor in the course of the colon.

Its great practical importance justifies also a recapitulation of every point bearing on the diagnosis between "complete" prolapse and the "partial" form of the affection which involves mucous membrane alone. Where the question arises as to the removal of a prolapse by operation, this distinction (which has hitherto received less attention than it deserves) assumes at once a vital importance; and, in a given tumor, it is often exceedingly difficult to determine, as I have already remarked, whether all the coats of the rectum are present, or the mucous membrane alone. The latter, i. e., "partial" prolapse, is generally assumed to be the more common variety of the affection, evidently, I think, because it occurs in a slight degree so frequently in children, and is so often present in connection with internal hæmorrhoids. In my experience this has not proved to be true. Even in children, when the prolapse is large, or of some duration, it generally contains all the coats of the rectum, and in a large protrusion in an adult I do not think I have seen an exception to this statement.

"Partial" prolapse is never very large; it is generally recent; its feel between the finger and thumb is not fleshy and firm, except when it has remained unreduced and become œdematous from strangulation; and its surface is puckered with creases, which, in a general way, radiate from its central opening. On the other hand, where all the coats of the bowel are present in a tumor, it is larger and of longer dura-

---

* "St. Barth. Hosp. Reports," vol. xii, 1876, p. 95.

tion;[*] it is more solid in consistence, assuming a conical shape; and often, when more than three inches in length, it presents a slight curve, resulting from the traction of its meso-colic attachment, which causes a bending to one side, or, in women, to the front, in consequence of the stronger adhesions to the vagina. The orifice at its extremity is more narrow and slit-like, a result also of meso-colic traction, for in "partial" prolapse it is rather circular and patulous. The presence of the muscular coat of the bowel in "complete" prolapse explains, by the contraction of its longitudinal fibers, the deeper transverse parallel folds which mark the surface of the tumor. Finally, there is a not uncommon feature of "complete" prolapse which, when present, constitutes unmistakable evidence of its character, namely, the gurgling of gas in the coils of small intestine present in the anterior peritoneal pouch, which may be felt distinctly in attempting to reduce the protrusion, just as in a large hernia; and from the same cause there is a possibility of sonorous percussion over this part of the base of the tumor, which is said to assume, when coils of intestine are present within it, a more spheroidal shape. Allingham mentions having met with gurgling in no less than seven cases of prolapse, four of which were in women.

(*To be concluded.*)

A CONTRIBUTION TO THE PATHOLOGY AND TREATMENT OF VASCULAR TUMORS OF THE EYELIDS AND VICINITY.[†]

By CHARLES STEDMAN BULL, A. M., M. D.,
SURGEON AND PATHOLOGIST TO THE NEW YORK EYE AND EAR INFIRMARY; LECTURER ON OPHTHALMOLOGY IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

ANGIOMATA of the eyelids and vicinity may be either cavernous or teleangiectatic—the latter being the most frequent and almost always congenital, while the former are rarer and are generally not congenital, but make their appearance during childhood or youth. It is certain that, in almost all the cases where the skin is involved, the growth has been congenital or appeared in very early infancy, and the probability is that the same thing is true of the angiomata that are more deeply seated, though from their very nature they are more likely to be overlooked. These tumors have been known to occur late in life, and may then be of traumatic origin. When seated entirely beneath the skin, the latter is generally healthy; but where the skin is involved, even though but slightly and in its deepest parts, it becomes livid and often very thin. Most of these tumors, whether cavernous or teleangiectatic, are of a capillary or venous nature, and only rarely are the blood-supply and the vessels directly arterial. This point of difference between them it is very important to determine, as it has a bearing upon the nature of the operative treatment.

---

[*] Nevertheless, I have seen the whole bowel shoot out, under strong provocation, at a first effort—just as, in exceptional cases, an inguinal hernia, occurring suddenly, is forced, at the same effort, down into the scrotum—and even strangulated, as in the case of a young man upon whom I operated at the New York Hospital who had ruptured himself in a violent effort to save himself from choking.

[†] Read before the American Ophthalmological Society, Newport, July, 1880.

The growth of these vascular tumors, whether congenital or not, is very uncertain. They often increase in size *pari passu* with the rest of the body; but, perhaps, as often remain stationary for a long time, and then suddenly grow very rapidly without any apparent cause. As a rule, the more superficial an angioma is, the more apt it is to be capillary in structure and teleangiectatic, while the deeper growths are generally venous and of a cavernous structure; but there are exceptions to both these rules. The angiomata may here grow to a very large size, which is probably due to the great vascularity of the parts, and to the looseness of the meshwork of the subcutaneous connective and adipose tissue. The larger the tumor, the more likely it is to be venous and cavernous, and the greater the probability of its being encysted, for the more perfectly it is surrounded by connective tissue, and the more closely pressed together are the bands of connective-tissue fibers, the more completely is the tumor encapsulated. This is of importance in deciding upon excision for its removal, for if the growth has a distinct cyst-wall its dissection is much easier, and the chances of hæmorrhage are much smaller, although so many vessels perforate this capsule that it is by no means a perfect wall.

These cavernous angiomata, on section, resemble similar growths elsewhere in the body, though the interior meshes of the trabeculæ are generally finer, and the spaces not so large as in regions where there is more connective tissue. If the cyst-wall is accidentally opened during its removal, the contents gush out at once, and the tumor collapses almost completely, showing the intimate connection between the spaces. The interior aspect of these cavernous angiomata is not, however, always the same, for the trabecular appearance is sometimes defective and even entirely absent. Paget speaks of parts of the vascular structure being consolidated with blood-clots or with partial obliteration of the vessels, and even of complete consolidation by adhesive inflammation. Another change that sometimes occurs is the transformation of a cavernous angioma into a sanguineous cyst. This probably results from an enlargement and coalescence of the venous channels, this view being confirmed by the mouths of veins having been found opening into the cyst. The contained blood is here venous and liquid, and the cyst-wall generally very thin and not easy of dissection. Of course, such a cyst collapses immediately when opened, and when completely divided may prove to be a single cavity lined by a smooth wall, or there may be some remains of trabeculæ.

Angiomata of the lid may be pedunculated and hang down from a small base, causing ptosis of the upper lid or eversion of the lower lid, according to their location. They are more apt, however, to have a somewhat broad base, though they may be freely movable beneath the overlying skin, which is not adherent. A somewhat extensive examination of these tumors in various parts of the body has led the writer to the conclusion that these angiomata are almost always venous. Microscopical examinations have shown that the wall of the cyst varies in thickness, but is always composed of a larger or smaller number of layers of connective-tissue fibers, perforated at all points by tortuous veins. The arteries are very few in number and very small. Sections of the trabecular structure have shown the same appearances of a mass of veins interlacing in connective tissue, some of the vessels being varicose, though generally this did not appear. According to both

Virchow and Robin, however, this sacculated appearance is very common. The cyst-wall is sometimes so dense that sections teach very little. The closely-matted fibers are difficult of dissection, and the blood-vessels are so firmly imbedded in the fibrous tissue as to make their isolation wellnigh impossible. In the blood-spaces between the trabeculæ inside the tumor, the walls are lined with endothelium, a prolongation of the lining endothelium of the veins. The enormous number of vessels penetrating this capsule make its removal extremely difficult without causing annoying hæmorrhage, and hence a lid-clamp should always be employed before attempting excision.

The most interesting point in the pathology of these vascular tumors of the lids, and the one least understood, is that disease of the tumor which results in the development of cysts in its substance. Another point intimately connected with this feature of angiomata, and one of which no mention has as yet been made within the knowledge of the writer, is the change of a dermoid cyst into a vascular tumor. A case of the latter kind was observed by the writer; the tumor was removed and a careful microscopical examination made, and it will be described further on. The history of the changes by which a cavernous angioma becomes in part or wholly a sanguineous cyst is very incomplete; and this must necessarily be so, for the opportunities of observing them are rare. It is probable, however, that the same process which develops a cavernous angioma, if carried on uninterruptedly, would end in the formation of a sanguineous cyst. The most plausible theory of the development of cavernous tumors is that there arise close to each other a number of circumscribed dilatations of small veins, and that their walls at the points where they touch become gradually thinner, and finally are absorbed, and thus the several cavities coalesce. Now, if this process is carried on continually, the blood-supply will cease to be conveyed in veins, and will be contained in irregular sinuses or spaces, divided from each other by trabeculæ of connective tissue, which are the remains of the walls of the veins. Eventually even these trabeculæ will be absorbed by mutual pressure, and a single large cavity will be formed, the walls at first rough from the remains of the absorbed dividing bands, but in the end becoming smooth; and thus a sanguineous cyst is formed. That this is the probable origin of such cysts is supported by the fact that the true cavernous structure and the sanguineous cyst have been found in one and the same tumor. Another point in favor of this mode of origin is that the contained blood is always fluid, while in cysts which have probably been serous the blood is coagulated as if from a hæmorrhage.

The following case of mixed cavernous angioma and sanguineous cyst was under the writer's observation, and the tumor was removed by excision, and a microscopical examination showed the mixed nature of the growth:

Case I.—*Cavernous Angioma and Sanguineous Cyst of the Upper Lid.*—Jane S., aged twenty-eight, presented herself at the New York Eye Infirmary September 29, 1879. She was an undersized, ill-developed woman, of marked strumous characteristics, looking much older than her actual age, and with her face and neck covered with acne pustules, some of which were dark red, as if containing blood. There was complete ptosis of the right upper lid, caused by the weight of a large tumor, of the size of a hazel-nut, which hung from the junction of the middle and inner thirds of the lid. The tumor was soft and elastic, had a nodular surface, was of a purplish color, and was adherent to the lid by a pedicle, which was of about one third the diameter of the tumor. The skin covering it was adherent, but the tumor was freely movable on its pedicle, and seemed to have no firm connection with the tarsus. The patient stated that there had always been a small red blotch on the lid since birth, which was probably a flat nævus, but that twelve years ago this had begun to increase in size, until it reached its present dimensions. It caused no pain, but was a marked inconvenience from the ptosis it occasioned. She was told that the tumor could be removed, and that the operation had better be done at once, as it might ulcerate and give rise to profuse hæmorrhage. This she declined to have done and went away, and did not appear again until two months later, November 28, 1879, when the tumor had increased somewhat in size. The lid could be partially raised by the action of the levator palpebræ muscle, and the orbicularis acted well, and seemed to diminish slightly the size of the tumor by making it less prominent.

The patient now consented to an operation, and she was anæsthetized, and a lid-clamp was carefully and firmly applied. The base of the tumor or pedicle was about half way between the eyebrow and the ciliary margin of the lid. An incision was made through the skin covering the apex of the tumor and parallel to the lid margin. The skin was very thin, and it was with the greatest difficulty that it could be dissected up without injuring the cyst-wall. By means of blunt-pointed scissors and a strabismus hook this was, however, done, the adhesions being nowhere firm until the base was reached. Here it was firmly adherent to the deep fascia, and in its growth had pushed the fibers of the orbicular aside. In attempting to detach the base of the cyst its wall was opened, and a large quantity of dark fluid blood poured out, and the tumor immediately collapsed. The cyst was then easily dissected out from its bed entire, and the cavity in the lid was carefully washed out and sponged dry. An examination showed that the angioma had been developed in the fibers of the orbicular muscle and the underlying connective tissue, but the tarsus was not involved, for its upper border was only on a line with the pedicle of the tumor. When the clamp was loosened, the cavity filled almost immediately with blood, which seemed to come from all sides, showing that the venous channels were very numerous. It was not deemed advisable to use any hæmostatic, so the lid-clamp was reapplied, and kept in position until all oozing had ceased. The lips of the wound were then closed by sutures and a pressure-bandage was applied. During the night the hæmorrhage recurred beneath the bandage, and on the removal of the dressing the cavity was found filled with clots, and the lid infiltrated and inflamed. During the day a bleb formed on the surface of the lid, and ecchymoses occurred in the lids of the other eye, and in several spots on the face. The cavity was again cleansed and left open, and moderate cold was applied. The hæmorrhage did not recur, the bleb subsided, the ecchymoses were slowly absorbed, and the cavity began to granulate from the bottom, and in three weeks was entirely healed. The whole process was very slow, which may be ascribed to the general unfavorable condition of the patient.

An examination of the cyst showed that the wall was thickest toward the apex of the tumor; and when it was laid completely open it was seen to be a mixed cavernous angioma and sanguineous cyst. There were some few fibrous bands or trabeculæ remaining, but they were short and imperfect, and the main part of the interior was one large cavity. Microscopical examination of sections of the wall of the sac showed that it consisted of layers of fibro-cellular tissue closely pressed together, perforated on all sides and in all directions by blood-vessels, most of them veins and some quite large. The cyst seemed to have been developed in the substance of the orbicular muscle, for on the outside of the cyst-wall were muscular fibers, some running longitudinally and others seen in cross section, while most of the fibers of the muscle were at the bottom of the cavity containing the cyst, and had been pushed aside by the growth of the latter. The vessels, especially the veins, were filled with blood-cells, and on the inside of the wall were several large cavities filled with blood-corpuscles, into which numerous vessels, mainly veins, opened. These sinuses no doubt communicated with the large central cavity. At various points in the wall of the cyst there was a cavernous arrangement of the fibers, the spaces existing here being filled with blood-corpuscles.

An interesting point in the pathology of these blood-cysts of the lids, and heretofore briefly referred to, is the possible transformation of a dermoid cyst into a blood-cyst. This was not suspected in the case referred to, at the time of operation, nor until the microscopical examination showed unexpectedly some of the constituents of a true dermoid cyst. The case is as follows:

CASE II.—The patient was a man, aged twenty-three, who said that there had been a small, red swelling, as large as a large pea, in the upper lid near the inner canthus, as long as he could remember. It had never occasioned him any inconvenience until within a year, during which period it had grown markedly in size, and caused pain and a sense of weight in the lid. When he presented himself to the writer, there was a tumor of the size of a large walnut, with a broad pedicle, hanging down from the upper lid, about midway between the ciliary and the upper border of the tarsus. The overlying skin was deep red, almost purple in color, and somewhat movable over it. Contraction of the orbicular muscle made no alteration in its size, but stooping or bending over increased it in size. There was no pulsation or thrill, and it was not specially sensitive on pressure. Its base seemed to be attached to the tarsus. It was determined to remove it by excision, and a lid-clamp was placed in position and screwed firmly down. An incision was then made horizontally through the skin covering it, and the latter was carefully dissected up on all sides. It was found very thin, and the orbicular fibers either had been pushed aside or were atrophied, as none were perceptible. The cyst-wall was successfully detached until the base was reached, but here the adhesions were firmer, and unfortunately the knife opened into the cyst, and a quantity of very dark and fluid blood escaped. The cyst immediately collapsed. There was but very little oozing of blood, and the tumor was easily dissected out and removed. The cavity was then cleansed and examined for bleeding vessels, but none were found. As soon, however, as the clamp was loosened, the hæmorrhage became quite profuse, and seemed to come almost entirely from the nasal end. A small catgut ligature, carbolized, was applied around a bunch of bleeding vessels, all clots were removed from the tissues of the lid, the wound was carefully closed by sutures, and a pressure-bandage was applied. The wound healed rapidly except at the nasal end, from which a thin discharge exuded for nearly a week. This then closed, and there has been no further trouble. The man has complete control over both the orbicular muscle and the levator of the lid, though there is still some ptosis.

The cyst was hardened in Müller's fluid and alcohol, and sections were then cut for examination. A microscopical examination of a number of sections made through different parts of the cyst-wall showed that the tumor had undoubtedly been a dermoid cyst, developed in the deep connective tissue of the lid and involving the tarsus at the point where the base was most adherent. The wall was made up of numerous layers of connective-tissue fibers very densely pressed together, but, contrary to what is usually found in dermoid tumors, the wall was perforated by numerous blood-vessels, more or less filled with blood-corpuscles, and opening either into sinuses in the cyst-wall or into the main cavity in the interior. Bands of muscular fibers could be traced in part over and in the wall, and at the base, where the wall was thickest, could be seen part of the structure of the tarsus, with remains of the Meibomian glands. The sinuses in the wall were filled with blood-corpuscles, and some of them were of large size. At one or two points on the interior surface were short hairs projecting into the cavity, their canals being lined with cylindroid epithelium. No trace of any sebaceous contents existed, such as is ordinarily found in dermoid cysts, and the extreme vascularity of the wall was another point of difference. According to the patient's story, the tumor dated from infancy, was probably congenital, and had always been red, and hence the wall highly vascularized. That the tumor had been from the beginning a blood-cyst is not probable, from the microscopical structure of its wall. Why it should have remained quiescent for so many years, and then have suddenly taken on a rapid growth without any known cause, does not admit of an explanation. An injury, such as a blow, might have excited inflammatory action in the tumor, but this would probably have terminated either in suppuration of its contents and ulceration through its wall, or in the formation of a clot from internal hæmorrhage from some of the numerous vessels in the wall of the cyst, which in its turn would probably have broken down and disintegrated. The case is of interest from its apparent inexplicability.

The deep extension of the growth into the tissue of the tarsus recalls a case of teleangiectasia of both lids of one eye, reported by Schirmer in the "Arch. für Ophthalmologie," vii, 1, p. 119, in which the vascular enlargement penetrated the conjunctiva, and even extended to the ocular conjunctiva. In this case also the growth existed from birth.

A few words, in closing, in regard to operative procedure. I most unhesitatingly affirm that I prefer excision by the knife to the other methods of treatment for the ordinary vascular tumors met with in the lids. Dr. Knapp, in a very interesting paper in the "Archives of Ophthalmology and Otology," v, Nos. 3 and 4, pp. 514 to 524, also claims for extirpation advantages over all other methods of treatment. While recognizing the possible dangers from hæmorrhage, he shows how the latter can be obviated or controlled. The lid-clamp forceps of Desmarres or Snellen, or Knapp's modification of Desmarres's instrument, should always be used, as the blood-supply is thus entirely cut off, and the operation can thus be made almost bloodless. If the tumor involve the ciliary margin of the lid, its removal may necessitate a subsequent plastic operation to remedy the defect in the lid; but angiomata are not so common in this situation as they are higher up on the lid. Knapp recommends here partial extirpation of the tumor, excising the epitarsal part, and trusting to shrinking of the deeper parts in the tarsus from loss of their blood-supply through the divided epitarsal vessels. Of course, in the larger angiomata, which extend into the orbit, some further steps are necessary, a discussion of which is beyond the limits of this paper. This latter class of tumors is considered in Knapp's paper, before referred to.

A CONTRIBUTION TO THE PATHOLOGICAL HISTOLOGY OF ACUTE PAROTITIS.

By EDMUND C. WENDT, M. D.

The minute anatomy of the salivary glands is comparatively well known. The physiological processes involved in their specific secretion are, in the main, fully understood. But our comprehension of pathological changes occurring in the glands of this group is singularly incommensurate with the knowledge we possess of their anatomo-physiological relations.

Some time ago I had occasion to observe an acute parotitis, as an accidental complication in a fatal case of meningitis. The opportunity for studying the morbid anatomy of parotid inflammation seemed a good one, and the glandular lesion was therefore carefully examined. My investigations resulted in the more accurate determination of several hitherto questionable points, which I believe to be of interest in this connection, even though they may be found devoid of any startling pathological novelty.

Briefly summarized, the essential circumstances attending the development of parotitis in this instance were as follows: In March, 1878, a patient, physically and mentally much debilitated, was admitted to the German Hospital, in New York, where I was then Resident Surgeon. The man's history, elicited from friends, and the symptoms he showed, both pointed to a chronic meningitis as the cause of his troubles. In spite of all treatment the disorder gained ground, he sank rapidly, and died on the 16th of March, at 8 P. M. On the previous day he had had a chill, rapidly followed by elevation of temperature; the febrile movement continued up to the time of his death, the rectal temperature varying between 101° and 103° F. On the morning following the chill, a painful tumefaction of the right parotid region became noticeable; subsequently there also appeared a slight swelling on the left side. In the evening, as stated, he succumbed.

At the autopsy, made twelve hours after death, there were found the meningeal affection that had had been diagnosticated, incipient cerebral softening, and profound general atrophy of the various organs and tissues of the body. The apices of both lungs showed scattered caseous deposits and old indurations, but disseminated tuberculosis was not discoverable. The right testicle was larger and harder to the touch than the left one. The parotid and submaxillary glands were dissected out, and, together with both testicles, removed for examination.

Macroscopical Relations.—The right parotid gland, somewhat larger than a hen's egg, was enveloped in layers of œdematous areolar tissue. Its surface was lobulated, and showed grayish protuberances and elevations, with surrounding areas of a reddish tint. Two thick processes bulged out from the inner inferior margin, and these were paler than the remaining portions of the gland. They were also found to be harder to the touch than the rest of the organ. The cut surface presented a mottled appearance. Rounded dots, varying in size (the largest not much greater than a pin's head, the smallest scarcely perceptible to the naked eye), were scattered over the parenchyma. These spots were especially conspicuous toward the central portions of the gland. They had a pale, muddy look. The surrounding structure was composed of irregularly formed patches of a fleshy hue, contained in meshes of a still darker tinge. In the processes above mentioned these appearances were somewhat modified. Here the parenchyma was recognized to consist of a yellowish tissue, relieved by a network of reddish streaks, and containing faint specks, barely visible to the naked eye.

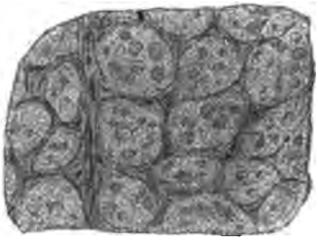


FIG. 1.—Portion of Cut Surface of Right Parotid, showing round spots studding the glandular lobules—the latter inclosed in a reticulum of hyperæmic interstitial tissue. (Slightly magnified.)

The submaxillary gland was of normal appearance. The inferred absence of structural modification was corroborated by the microscope. This gland may therefore be dismissed from further consideration.

The parotid of the left side was of abnormally firm consistence, but was only moderately enlarged. In all other respects it resembled the two processes of the right parotid.

Microscopical Appearances.—Teased preparations of both glands were examined in Müller's fluid and diluted chromic acid ($\frac{1}{20}$ per cent.) immediately after removal from the body. Different portions of the organs were hardened, some in strong alcohol, some in neutral chromate of ammonium, others in Müller's fluid, or a $\frac{1}{8}$-per-cent. solution of chromic acid. Numerous sections from every available portion of the glands were then made. Some of these, properly stained, were examined in glycerine, others were mounted in Canada balsam. As staining-fluids I employed Beale's carmine, Fischer's eosine, picro-carmine, hæmatoxyline, and my own combinations of eosine and picric acid, or hæmatoxyline and eosine.*

I will begin by recording the morbid appearances found in the left parotid, where, as became manifest by comparison, the disease was still in its incipient stage. A general survey of a number of thin sections of the hardened gland showed clearly enough that the most prominent textural changes had concerned the blood-vessels and the inter-acinous spaces. All the arterioles were greatly distended and thickly packed with blood-corpuscles; the capillaries were in a similar condition of active hyperæmia—here and there, indeed, one had become ruptured, and free hæmorrhage into the surrounding tissue

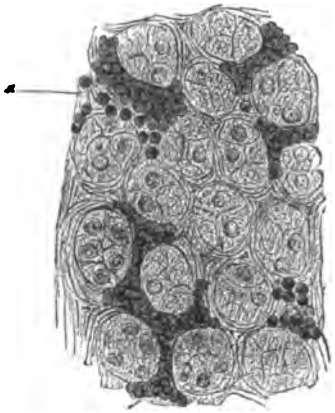


FIG. 2.—Section of Gland of Left Side (Hartnack, oc. 3, obj. 7), arterioles choked with blood-globules; a ruptured capillary at *a*; hypertrophy and proliferation of secreting epithelia. (The leucocytes crowding the inter-acinous conjunctive tissue have purposely been omitted from the drawing.)

---

* See WENDT, "Ueber die Harder'sche Drüse der Säugethiere," Strassburg, 1877, pp. 27, 28.

had resulted. The interstices of the parenchyma proper showed serous imbibition, dense infiltration of leucocytes, and scattered red blood-corpuscles. The circumglandular connective tissue exhibited similar morbid alterations, but in a less degree, the changes being as yet chiefly intravascular. On examining very thin sections with a higher power (Hartnack, oc. 3, obj. 7), the secreting elements were also found to have already undergone important alterations. Upon comparison with normal glands it became evident, not only that the epithelial components of the lobules were considerably enlarged, but that their protoplasm was far less granular, more homogeneous, and paler, and the cell-boundaries withal less marked. In addition, the nucleus was often dimmed by seemingly morbid cell-contents, though the nucleoli, frequently two in number, were distinctly visible, as bright specks in a vaguely spheroidal mass, indicating the nucleus. Hence these cells were engaged in active proliferation. There was, then, individual epithelial hypertrophy and concomitant cellular hyperplasia. The remaining gland-elements, the salivary ducts, were distended with an opaque amorphous substance, in which

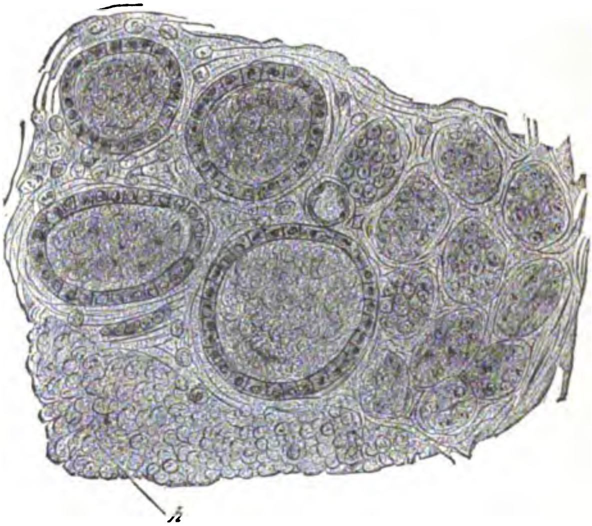


FIG. 3.—Section from Gland of Right Side, showing portion adjoining periphery. Transverse section of four distended salivary ducts; hæmorrhagic collection at *h*. (Oc. 4, obj. 7.)

lay imbedded occasional bodies resembling leucocytes. The lining epithelium of these canals was somewhat flattened and abnormally dark, otherwise unaltered.

The first glance at the other gland at once displayed numerous and extensive degenerations. I shall try to analyze these, step by step, in order to avoid possible confusion. Certain gland-territories were still almost unchanged in structure, others resembled the portion already described, and still others had become so altered as to be no longer recognizable as glandular tissue. The most intense modification had occurred in the interior of the gland; the outer borders had scarcely been reached by the process of degeneration. Turning our attention for the moment to the former, we found, instead of sacs containing secreting epithelia, only rounded meshes of connective tissue, filled with accumulated débris, the product of cellular disintegration. Scattered in this mass we were still able to discover free nuclei, fat-granules of various sizes, and pus-corpuscles imbedded in a finely molecular substance. The periphery of these meshes sometimes showed the remnants of

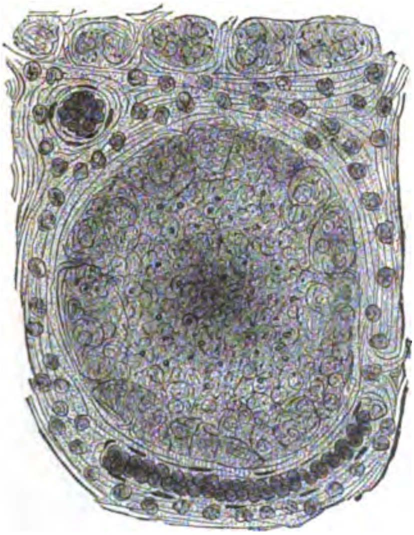


FIG. 4.—Central Portion of Right Gland, showing a round mesh containing internal débris; peripheral remnants of acini; the surrounding connective tissue moderately infiltrated with leucocytes. (Oc. 4, obj. 7.)

acini with barely recognizable epithelial elements containing altered nuclei. These collections represented the most advanced stage of the disease, were not very numerous, and may be regarded as small pseudo-abscesses. They were surrounded by blood-vessels less distended than in the portions already referred to, and by interstitial tissue, the seat of sero-purulent infiltration and globular extravasation. Then followed gland-tissue where the distribution of cellular elements still retained the typical appearance of secreting structure. But the epithelia were very much swollen, filled with fat-granules, the

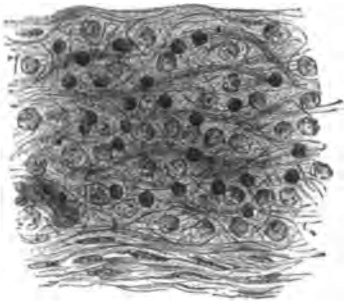


FIG. 5.—Sero-purulent Infiltration and Globular Extravasation of Interstitial Connective Tissue. (Oc. 4, obj. 7.)

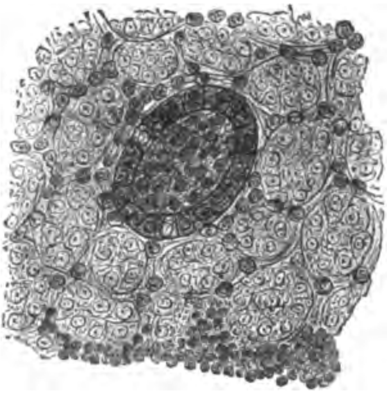


FIG. 6.—From the Gland of the Right Side. Toward the center, a salivary duct, replete with puriform matter, its lining epithelia flattened and abnormally dark; the acinous epithelia contain distinct nuclei; the interstitial tissue still infiltrated; at the lower right-hand corner free hæmorrhage has occurred. (Oc. 8, obj. 7.)

nucleus either absent or invisible, and their interconnection quite loosened. In a word, they represented a condition of granulo-fatty degeneration, just short of final disintegration. Further on, i. e., in an eccentric direction, we noticed the circumlobular tissue less infiltrated, the epithelia possessing characteristic nuclei, some, indeed, inclosing a double nucleus. But, instead of the normal granular protoplasm, the cell-contents consisted of a homogeneous substance, with occasional fat-molecules. In this region the salivary ducts were crammed with puriform elements, their lining epithelia flattened, darker, but less granular than normal. Many of these duct-cells included two nuclei, but there was an occasional gap in their

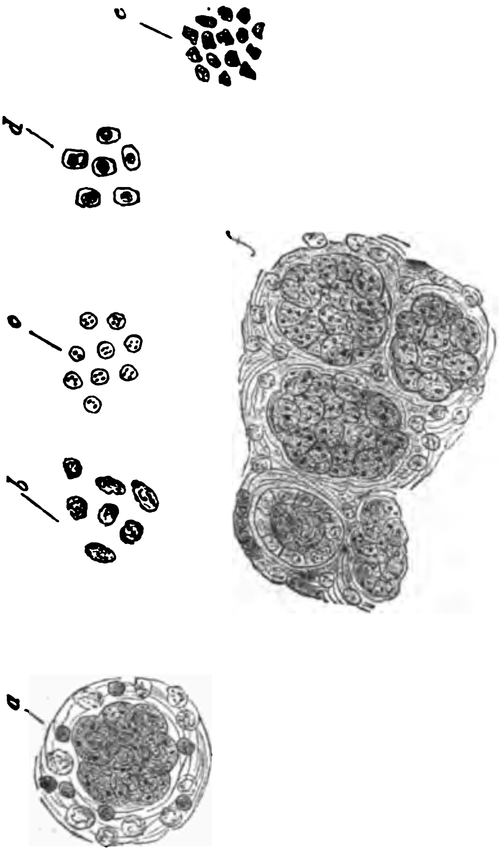


FIG. 7.—At *a*, an acinus, surrounded by connective tissue; the epithelia in a condition of cloudy swelling; the connective tissue infiltrated with leucocytes and containing red blood-globules. (Examined fresh in Müller's fluid—oc. 4, obj. 7.)
At *b*, *c*, *d*, and *e*, different forms of cellular elements floating in the liquid; *b*, ovoid and spheroidal leucocytes; *c*, nuclei of secreting epithelia; *d*, elements derived from the salivary ducts; *e*, shrunken corpuscles of various origin; *f*, cloudy swelling, with commencing fatty degeneration. (Oc. 3, obj. 7.)

continuity, as if an epithelium had dropped out of rank and its place had been left vacant. Still advancing, we came upon groups of epithelia so arranged as to accurately resemble normal acini. On comparison, however, it appeared that, apart from this general similarity of configuration, a wide diversity obtained. The individual cells had encroached on the intraäcinous lumen to such an extent as to make that opening seem to have entirely disappeared, and they were themselves in a condition of cloudy swelling. Here the circumglandular tissue was again replete with colorless blood-corpuscles. It formed wide meshes, in the interspaces of which lay the degenerated epithelia. Still other portions, those nearest the exterior rim of almost normal parenchyma, displayed only those changes already described as existing in the other gland. Modifications of a character similar to the latter were encountered in the two processes previously mentioned.

Estimation of Pathological Significance.—Having thus far considered the subject chiefly in its morphological bearings, I now take up the interpretation of the pathological processes involved in the disease. This may enable us to satisfactorily determine the interrelation of microscopical appearances and clinical characters, which should form, in part at least, the object of every investigation of this kind. I must premise, however, that I am not prepared to state whether the lesions in the parotid gland were only the indirect expression of some toxic principle circulating in the blood, or whether they were induced by some indeterminate and indeterminable topical irritation proceeding perhaps from the buccal cavity. Indeed, whether merely a coincident complication or a spontaneously developed so-called idiopathic affection, I find the main interest of the case to be centered in the fact of the unquestionably acute character of the extensive degenerations. The local signs in this instance, it will be remembered, were developed quite suddenly after a chill on the previous day, and some twenty hours before death. It might be argued that the disease began long before it became clinically perceptible; but when we consider the initial chill, preceding all local manifestation, such reasoning seems futile, and may be dismissed without further notice. Had the man lived and the morbid process been continued, there might have been further resolution, and finally re-absorption of the molecular detritus mentioned; for, along with the process of rapid destruction, we have observed a constructive hyperplasia of secreting epithelia, so that newly-formed elements were alread yon hand, waiting, as it were, to replace the vanishing older generation. This new formation of typical gland-tissue went on simultaneously with the retrogressive metamorphosis of other secreting structure. Had all the accumulated débris suffered rapid re-absorption (a process which is by no means improbable, considering the finely molecular and fatty nature of its ingredients), we should not have hesitated to call the disease mumps (parotitis polymorpha). On the other hand, had extensive suppuration or sloughing supervened, we should have pronounced the case an example of metastatic purulent inflammation. In the absence of either consummation, it would appear idle to discuss the greater or less probability of one or the other termination. Nor does this seem to me to affect the interest of the case. The question therefore remains an open one, whether we were dealing with mumps, *sensû strictiori*, or with secondary parotitis. That it was an instance of quite acute parotitis is perfectly evident.

I think, in view of the paucity of well-examined cases of this kind (a very natural paucity, it is true, considering the short duration of acute parotitis, its slight dangers, and manifest tendency to spontaneous recovery), any contribution to its pathology deserves to be placed on record; for the absence of a grave prognosis will surely be admitted as not necessarily excluding pathological interest. The pathologist may find ample material for study and reflection where the clinician fails to recognize either importance or interest.

After this digression, we will resume the discussion of the nature, origin, and growth of the morbid process in the case engaging our attention. The first stage of the disease was evidently one of congestive hyperæmia. The arterioles and capillaries were visibly distended and packed with blood elements. Simultaneously with or immediately after this increased blood supply, exudation of liquor sanguinis and emigration of numerous leucocytes, with occasional red globules, took place. About this time rupture of capillaries also

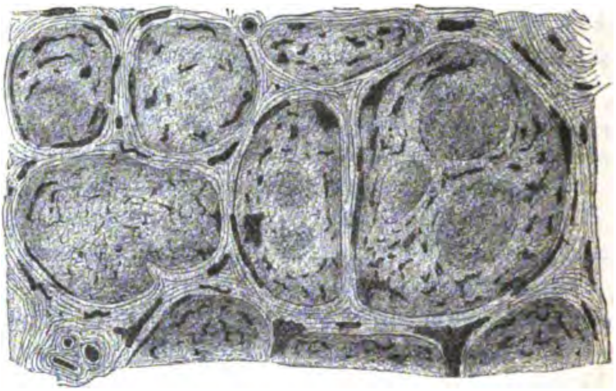


FIG. 8.—From a process bulging from the gland of the right side; interstitial hyperæmia and hæmorrhage. (Oc. 2, obj. 5.)

occurred. These are familiar phenomena, and require no further elucidation.

Until now the epithelia of the secreting parenchyma remained intact, though the salivary ducts were already filling with material, and contained many formed bodies. The latter were partly of hæmic origin, and partly derived from the cell-elements of the ducts themselves. Now, under the abnormal trophic stimulus of excessive blood-supply, a pathological growth of each individual cell took place, at the same time the nucleus divided into two, and subsequently segmentation of the whole cell ensued. The epithelia thus rapidly underwent numerical increase. This was the period of hypertrophy and hyperplasia. Soon, however, the acinous secreting constituents quickly underwent cloudy swelling, then fatty degeneration, and finally complete disruption. The confluent products of this necrobiotic metamorphosis accumulated in the meshes of the interstitial tissue (see Figs. 3, 4, 5, and 6). The more succulent ingredients of this connective material were themselves totally destroyed in the general breaking-down. Some of its fibers, however, and notably the elastic fasciculi, opposed a firm resistance to the last, so that there was no diffuse infiltration, but circumscribed aggregation of a detritus of very complex origin. This, in our case, was the final phase (Fig. 3).

That, prior to this dénouement of the retrogressive metamorphoses, there had been established a condition of progressive hypertrophy and active proliferation, has already been noted. In the collections of tissue-débris just mentioned, there might still be recognized, as a pooof of their origin, epithelial cells in a state of advanced degeneration, numerous free nuclei and commingled leucocytes, fat-granules, and, in quantity the most conspicuous, a finely molecular mass, already described. Examples illustrative of the different phases of this extremely rapid pathological action were readily found in the various portions and regions of both glands.

An examination of the left testicle showed the same to be free from structural alteration, barring only an ordinary general atrophy. The right one was found to be in a condition of moderate hyperæmia, in conjunction with which slight exudation had taken place. Since the existence of a certain peculiar "*consensus*" between glandular bodies is a well-established empirical fact, I dismiss these changes as undeserving of further comment. Incidentally, it may be mentioned that serous exudation had also occurred into the cavity of the tunica vaginalis propria of the right testicle.

Reviewing the series of morbid transformations which constituted the parotid affection in our case, we must at once concede the analogy between this disease and certain forms of very acute and intense inflammation of mucous surfaces; conjunctival blennorrhœa, for instance, say from gonorrhœal infection, would furnish an example characterized by similar successive stages of hyperæmia and proliferation, followed by rapid tissue destruction, with the eventual possibility of a *restitutio ad integrum.* This is no similarity arbitrarily adduced, but an analogy springing from the histogenetic structural likeness of the glands of this order to mucous surfaces generally. It is therefore something beyond the fundamental resemblance of all inflammatory processes. Though I wished to emphasize this point, it seems needless to enlarge on it here.

In conclusion, it may be interesting and instructive to take a cursory glance at the opinions of authors on the nature of this affection, and in this way institute a brief comparison of their conclusions with the deductions derived from my own examination. Formerly, the circum-glandular areolar tissue was supposed to be the principal seat of the disease. The gland itself, it was held, rarely if ever participated in the morbid process. This view, based chiefly on clinical evidence, is still retained by some authors. Others, from inferential analogy, rather than actual observation, maintained the complete identity of parotitis with inflammation of the lymphatic glands. Virchow ("Annal. d. Charité," Berlin, 1858, viii, 3) showed the opinion to be erroneous which located the affection in the conjunctive tissue surrounding the gland. He regards parotitis as essentially a catarrh of the salivary ducts and secreting parenchyma, with frequently a secondary participation of circum-glandular connective tissue. My case, it will be seen, therefore, only partially bears out his interpretation of the subject, the ducts in this instance being the seat of secondary, not primary change. Förster ("Handbuch d. pathol. Anat.," Leipzig, 1863, p. 48) described several distinct phases of the disease. According to this author, there is initial hyperæmia, then rapid exudation, followed by purulent infiltration of the inter-acinous spaces. The terminal secreting vesicles undergo fatty degeneration. Re-absorption may take place, but diffuse necrosis, causing abscess, is more common. This, then, is a view which receives corroborative illustration from my case. The chief point of difference is that he makes no mention of the stage of cloudy swelling preceding that of fatty degeneration of the epithelia. But this is probably only an omission, and not a fault of observation.

Klebs ("Handbuch d. pathol. Anat.") thinks the affection invariably begins with swelling and redness of the interstitial tissue. The subsequent and consequent proliferation is most active in immediate proximity to the secreting vesicles. Diffuse purulent infiltration precedes parenchymatous necrosis. Gangrene of various regions of the gland is established. In many cases there is only periparotitis. His "swelling and reddening" correspond to the initial hyperæmia of Förster, as well as the first stage of the disease in my case. But in the latter the infiltration of pus was not diffuse; moreover, the limited necrosis was preceded by distinct periods of cloudy swelling and fatty degeneration.

Rindfleisch ("Lehrb. d. path. Gewebelehre," Leipzig, 1873, p. 510) found hyperæmia, œdema, *and* cloudy swelling, *followed by* puro-catarrhal secretion, proceeding partly from the epithelia of the acini, partly from the surrounding conjunctive tissue, with a simultaneous cellular infiltration of the interlobular spaces. These changes preceded a breaking through of the pus into the alveoli, thus causing their destruction. In my case, it will be remembered, the alveoli were broken up by intra-alveolar, not extra-alveolar processes.

Vogel, in Ziemssen's "Cyclopædia," states that only hyperæmia and serous imbibition can form the anatomical basis of mumps, since other products are not capable of rapid re-absorption. He also describes a secondary purulent catarrh, with accumulation of a viscid, tawny secretion in the tubules of the gland, usually followed by sloughing. He invalidates the acceptability of his views by admitting them to be inferred from analogy instead of based on actual observation.

Amid the existence of this great diversity of opinion, a certain underlying similarity still prevails, yet this only tends to show that the subject is not the simple one it might seem. I will not add to the length of this paper by citing other authors. Nor does it appear needful to append a résumé of conclusions deducible from my case. Corroboration, chiefly of the results of Förster's investigations, being implied, I refrain from an explicit demonstration of the points of likeness and difference.

ARE THE BENEFITS TO BE DERIVED FROM INTERNAL URETHROTOMY, AS NOW ADVOCATED FOR THE RELIEF OF STRICTURE, COMMENSURATE WITH ITS DANGERS?*

BY AMBROSE L. RANNEY, M. D.,
ADJUNCT PROFESSOR OF ANATOMY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

(*Concluded from August Number.*)

C. THE BENEFITS CLAIMED.—From the published statements of the advocates of the dilating urethrotome, the following premises seem by them to be considered as fully proved:

1. That "gleet is the signal which Nature holds out to indicate the existence of urethral stricture"; and that by the removal of the cause the only means of *radical cure* of this symptom is insured.

2. That *certain obscure symptoms*, among which may be mentioned neuralgic pains in the pubic region, the back, the rectum, the testicle, and the lower limbs, are reflex in character, and are likewise dependent upon urethral stricture, in a large proportion of cases.

3. That all methods of treatment of urethral stricture save incision have been found worthless as a means of radical cure.

4. That the dilating urethrotome does effect a radical cure of the stricture, and that the symptoms dependent upon the latter are likewise relieved in the majority of cases.

5. That the operation advocated is comparatively *free from danger*, and that the benefits derived from its use recommend it to the medical profession, to the exclusion of the older methods of treatment.

6. That the records of published cases in which the urethrotome has been used support each and all of these conclusions.

It is impossible, within the compass of one single article, to discuss whether the first three of these propositions can be fully established. The causes and treatment of gleet are questions which to-day are certainly open ones, and cases are reported of its cure by other methods of treatment as well as by the use of the urethrotome. The first proposition, in itself, involves the great and undecided question of *what constitutes a stricture*, and until the profession can agree upon this point, it is useless to attempt to discuss it. Those who claim that the normal urethral caliber is not impaired, provided an instrument corresponding to 23 or 24 F. can readily be passed to the bladder, and that all apparent constrictions detected by larger instruments are mere undulations in the urethral walls, not dependent upon disease, can unquestionably present cases not in accordance with this view. Thus, Sir James Paget says: "Every year teaches me more and more plainly that a very large number of cases of stricture of the urethra are not really dependent on any fixed condition of the urethra, but are mere *swellings of the mucous membrane*.* Such an opinion from so prominent an authority can not be hastily set aside.

---

* Read before the New York Academy of Medicine.

The second proposition opens again for discussion the great question of *reflex irritation and its various manifestations*. That such conditions do exist, no one at all familiar with the literature of the subject can deny, although "sexual hypochondriasis" may account for a large proportion of imaginary symptoms, which are to be distinguished from those due purely to reflex irritation; but, when symptoms referred to parts distant from the urethra are interpreted as dependent upon urethral constrictions of large caliber, not impeding the flow of urine, and are made the indication for a cutting operation which is not infrequently followed by serious complications, the advisability of such a procedure may well be questioned. Of the second series of operations reported by Dr. Otis (136 in number), 78 were performed for the cure of gleet, and 48 for the relief of reflex troubles. It may well be asked, if self-questioning is of any value in determining our actions toward others, how many of us who are here assembled would have our urethra cut for pain in the back, pubes, perinæum, rectum, or legs, until we had exhausted every other means of relief which had ever proved successful in the cure of such conditions?

Let us see what have been enumerated as reflex troubles in

---

* "Clinical Essays and Lectures," London, 1875. The italics are my own.

59 cases of this character, appended to this paper,* where accidents have followed the operation of internal urethrotomy:

Frequent and painful micturition	in	15	cases.
Seminal emissions	"	4	"
Premature emissions	"	3	"
Neuralgic pains in distant parts	"	5	"
Imperfect erection	"	2	"
Spermatorrhœa	"	1	case.

It may not seem out of place to ask if such conditions have not frequently been seen by many of us, who have cured them by simple measures rather than by recourse to the knife. All these methods may have been tried even in these cases previous to the operation, but no such statement is made, nor can I see how the cure reported of these symptoms carries any positive evidence either for or against the use of the operation in preference to other and simpler means of relief.

The third proposition, which denies the possibility of curing stricture by any other method, is one well worthy of discussion. To my mind, more importance has been attached by the advocates of this new method of treatment to the possibility of the return of stricture than the histories of cases seem to warrant. In a few occasional instances, strictures do manifest a quality which is called *resiliency*, and which is evidenced by a tendency to return to their former caliber almost at once after the withdrawal of a dilating instrument. Such cases as these, as is evident to any reasonable mind, can not be benefited by dilatation, and must continue to produce their own symptoms until *by incision* or *rupture* their elasticity is destroyed. Strictures of *traumatic origin*, which are usually indurated and cartilaginous in type, often fail to yield to the most persistent efforts to dilate them, and, even if fully dilated, are with difficulty kept from re-contraction by the occasional passage of an instrument. In the majority of instances, however, the ordinary forms of stricture, which result from inflammatory conditions of the urethra, are easily dilated, and can be kept free by the occasional passage o an instrument by the patient himself, in case a tendency to re-contraction is anticipated. From my own experience, and from that of others who have practiced this system of treatment in a much larger number of cases and for a much longer period of time, I have never had any reason to doubt that a *certain proportion of cases have been completely cured by dilatation*, while in others the tendency to re-contraction was so slow that the patients were relieved from all symptoms for a long period of time, even where instruments were not introduced at intervals to prevent the return of the trouble.

---

* As read before the Academy.

The advocates of urethrotomy, however, lay great stress upon the annoyances which must arise from the necessity of a constant passage of instruments at stated intervals by the patient or by the surgeon, and contend that a means, even if it has dangers, which will insure a radical cure, would be accepted by intelligent patients in preference to a method of treatment which required future care and attention to the diseased part. This objection, to my mind, appears to be in opposition to reason, provided the patient feels assured that, by a process which has few if any dangers associated with it, the symptoms for which he seeks relief can be effectually controlled by the passage of an instrument at intervals of seven or fourteen days after dilatation is once accomplished. On the same ground, it might as well be argued that persons who did not desire the growth of a beard would prefer the operation of depilation to the occasional annoyance and expense of shaving.

The aim of all forms of treatment is, principally, to relieve the symptoms which are distressing the patient, and I have never found, from personal observation, that patients would not willingly and joyfully accept a means of relief in which the dangers were slight and no privation from business was required, in preference to one where the complications might be distressing and where confinement to the house was an absolute necessity. Unfortunately for the sake of the argument, the advocates of dilatation, not feeling the great necessity of convincing the profession of the possibility of a radical cure, have not reported as fully as might be wished the caliber of the strictures which they were called upon to treat and the results of a subsequent examination; but I think it can be positively stated, that, in some instances at least, strictures of the urethra have, by constant dilatation, been entirely cured, through an absorption of the inflammatory products in or around the urethral walls, to whose contraction the urethral constriction was originally due.

The fourth proposition, that the dilating urethrotome does effect a radical cure of strictures of the urethra, I am prepared to accept—with the proviso that this method, like the one whose merits have been previously argued, *will also occasionally be found to fail* in accomplishing permanent relief. I am inclined to think that, perhaps in a proportion of cases even larger than dilatation can present, prevention of re-contraction follows the use of the urethrotome; but even this admission hardly seems to me sufficient to justify the use of this instrument, except in such conditions as are associated with symptoms which a prolonged and careful trial of the treatment by dilatation has failed to arrest. I do not think that any circumstances, no matter how serious, should justify a surgeon in resorting to internal urethrotomy when the stricture is situated more than four inches from the meatus, since external section affords a better prospect to the patient. In almost all the cases reported where serious consequences have followed the use of the dilating urethrotome, the situation of the stricture has been below that point. Rigors, severe hæmorrhage, urethral fever, and urinary infiltration are much more liable to occur when an incision is made in the deep urethra than when it is made anterior to the peno-scrotal junction.

Robert Wade * takes positive issue with the advocates of the urethrotome, in the following sentence: "It is well known that internal division of strictures was fully tested in England by Guthrie and Stafford, who lately acknowledged its hazards, and were so much disappointed with the little permanent relief which it afforded, that they were ultimately induced to abandon the practice, except in cases of emergency. Should the views which I have advanced induce others to hesitate before they resort to the more hazardous method of treatment which has lately been too prevalent, it is to be hoped that my labors in this branch of the profession may prove useful in saving many patients from the risk incurred by them from operations not infrequently fatal, and which, I feel convinced, are seldom required."

---

* WADE, "On the Treatment of Stricture," Preface, London, 1860.

The fifth proposition, that the operation with the urethrotome is comparatively *free from danger*, has been quite extensively discussed in previous pages of this article. It is, however, with great interest that I present, in addition to the statistics before mentioned, an analysis of the essay of Dr. W. Grégory,* which has created no little comment in some of the leading journals of Europe. Dr. Grégory, in summing up the cases of internal urethrotomy collected by him, says: "In adding the total of the results obtained from different statistical reports, we arrive at a grand total of 872 cases, with 38 deaths; and, if the cases from the records of the Hospital of St. André be added, we have a total of 915 operations, with 46 deaths; giving a mortality of five per cent." In his paper I find some of the fatal cases which I report omitted, while, on the other hand, he gives the records of many cases which it would otherwise have been impossible for me to reach.

From the same essay other deductions may be drawn, as follows: 1. The proportion of fatal cases to the total of recorded operations with the urethrotome has been under-estimated by the profession at large, and almost equals that of perineal section; 2. The other accidents which may accompany the operation are often most alarming, especially that of hæmorrhage; and the statistics offered by European surgeons show a much more serious list of dangers than the reported cases of some American surgeons would indicate; 3. The comparative freedom from the dangers of hæmorrhage and urinary infiltration presented by perineal section, and the nearly equal percentage of mortality with which the operation of internal urethrotomy seems to be associated, are leading the thinking men of our profession to question if internal incision within the deeper portions of the urethral canal should ever be performed.

From a close analysis of those reported cases where the facts are given in sufficient detail to allow of any positive deductions being drawn, I summarize the results of internal urethrotomy as follows:

---

* "De la Méthode Sanglante dans les Rétrécissements de l'Urèthre," Paris, 1879.

In the 240 cases which Dr. Otis * reports as operated upon by himself, and in all but four of which full details are given, we find that

Hæmorrhage occurred	in	5·5	per cent.
Rigors or urethral fever	“	7	“ “
Deformity of the penis from curvature	“	4	“ “
Death	in about	2	“ “

In the 43 reported cases of the Hospital of St. André, the details of which are fully given by Grégory: †

Hæmorrhage occurred	in	86	per cent.
Urethral fever	“	59	“ “
Rigors	“	36	“ “
Abscess	“	9·5	“ “
Infiltration of urine	“	14	“ “
Retention of urine	“	16	“ “
Death	in nearly	20	“ “

In the 68 reported cases of the Hospital of the University College, the details of which are also given by Grégory, we find that

Hæmorrhage (severe) occurred	in	7	per cent.
Urethral fever and rigors	“	20	“ “
Abscess (perineal)	“	11	“ “
Curvature of the penis	“	4	“ “
Abscess (lumbar)	“	4	“ “
Orchitis	“	4	“ “
Pyelitis	“	8	“ “
Cystitis	“	6	“ “
Death	“	5·75	“ “

The fatal cases (sixty-eight in number) collected from the statistics of Dolbeau, Maisonneuve, Guyon, Voillemier, Gosselin, Sédillot, Reybard, Barbosa, Tillaux, Labat, Sentex, Lannelongue, Otis, Bumstead, Van Buren, Gouley, Stein, Denucé, and others, show the average proportion of deaths to be about 5 per cent.

The records of those cases where serious accidents or complications have followed the operation of internal urethrotomy,

---

* Professor T. N. Otis, "Treatise on Stricture," New York, 1878.

† *Op. cit.*

show a rapidly increased percentage of such accidents in operations performed *below three inches* from the meatus. Cases of hæmorrhage, where this operation has been done at the office, and the patients sent to their homes, are becoming so frequent in this city that surgeons are constantly having their attention called to them.*

The personal statements of some of our leading surgeons, lately made to me, confirm the experience of myself and others, who have been alarmed at the hæmorrhage which sometimes occurs; and several have assured me that, for this very reason, they now hesitate to cut unless compelled to do so.

The occurrence of urethral fever seems to be much more frequent in Europe than in this climate; but rigors are a very common sequel of the operation, even in this country. This sequel may not always possess a great clinical significance, but I question if a severe chill, when dependent upon a surgical procedure, does not always create anxiety in the mind of a careful surgeon, since it may indicate the commencement of some serious complication.

The deformity of curvature of the penis is often spoken of by the advocates of urethrotomy as a trivial and temporary annoyance, and of but little consequence; but, in my experience, it sometimes proves permanent, and always creates a feeling of annoyance and disgust on the part of the patient, which it is difficult to appease. I have collected from private case-books in this city the records of some 200 operations which have never been reported. I find by analyzing them that a large percentage of patients have been cut for what have been diagnosticated as reflex troubles, such as lumbago, sciatica, and plantar neuralgia; and that in most of the other cases chronic gleet was taken as the indication for surgical interference. In a remarkably small percentage of these cases was the contraction sufficient to impede the flow of urine or probably to render it evident to the patient that a stricture existed, unless first so informed by his physician. It is greatly to be regretted that, in the larger proportion of the cases which I have been able to reach, the details as to the situation of the stricture, its length and caliber, the severity of the symptoms complained of by the patient, and the previous methods of treatment employed for the relief of these symptoms, are either so given as to be worthless for comparison or are entirely omitted.

---

* After this article was written, an ambulance brought into one of our city hospitals a patient who was with some difficulty saved from death from hæmorrhage, where this operation had been performed in a dispensary, and the patient sent home without attendance. Had his condition not been accidentally discovered, he would have bled to death alone in his rooms.

In concluding this article, I present the following rules, which I consider as the proper guides in the treatment of uncomplicated urethral stricture:

1. Seldom resort to the knife, except the stricture be of *traumatic origin* or *resilient*, or situated at the meatus.

2. Never perform internal urethrotomy if the situation of the stricture be *more than four inches from the meatus.* (I question if three inches would not be a safer rule.)

3. In *strictures of the deep urethra*, in case dilatation is impossible, *divulsion* and *perineal section* are the two best methods of treatment.

4. Dilatation, if carefully and judiciously used, will be found to be practicable in the majority of cases, and in many cases will *entirely relieve all symptoms.*

5. Internal urethrotomy, if performed for the relief of "strictures of large caliber," should be resorted to only when the symptoms presented by the patient *have been treated by other methods without relief;* and then only in the anterior four inches of the urethral canal.

In support of my first rule, viz., never to cut internally if the stricture be situated more than four inches below the meatus, I present the following statistics as afforded by those of the collected cases where the full details are given. In Dr. Otis's reported cases (two hundred and thirty-six in number) all the patients that had hæmorrhage after the operation, with two exceptions, were cut below this limit; while rigors occurred only four times, curvature five times, and abscess twice, when the operation was performed in the anterior four inches of the canal. Should the rule be modified to three inches, instead of four, the percentage of accidents would be found to be much smaller than that previously given.

In the total of cases collected, urethral fever seems to occur in a large proportion of operations where the incision is made at a point more than three inches and a half from the meatus, and seldom to follow incisions in the anterior portions of the urethra. Infiltration of urine and abscess must of necessity occur in a larger percentage of cases in which the incision is made in the region of the bulb than of those in which it is made in the ante-scrotal portion of the canal.

I can not agree with those who claim that incision of the *upper wall* of the urethra obviates the danger of infiltration or hæmorrhage. It may possibly decrease the danger of infiltration, but I can not see why an incision through the corpus spongiosum and possibly into the corpora cavernosa, near the point of union of the crura, should have any decided advantage in respect to hæmorrhage over an incision in the median line of the bulb.

The other rules given for the treatment of stricture of the urethra differ but little from those advocated by most of the conservative surgeons whom I have consulted, and from whom I have quoted in this article; and they seem to me to be sustained by the results of those reported cases which have been previously analyzed.

Finally, I trust that this paper, while plain words have of necessity had to be spoken, betrays no evidence of a spirit which is not that of a "seeker after truth." When new theories are advocated, and the profession is asked to accept new procedures as improvements upon well-tried methods of treatment, no replies can be made without constant reference to the source of such new views, and a close analysis of the facts recorded.

SUMMARY OF CASES ANALYZED.

Grégory	915 cases
Otis*	214 "
From private case-books, about	200 "
From scattered sources (among journals and monographs), about	100 "

---

[*] I find 100 of the cases reported by Dr. Otis recorded in Grégory's "Essay," and the 214 cases enumerated above represent, therefore, only the remainder of the cases contained in Dr. Otis's volume.

A SUPPLEMENTARY NOTE ON PERSISTENT PRIAPISM.

By GEORGE L. PEABODY, M. D.,
MEDICAL REGISTRAR AND PATHOLOGIST TO THE NEW YORK HOSPITAL.

Since the publication of my article upon "Persistent Priapism" in the May number of this "Journal," my attention has been called to three other cases of the condition occurring in patients suffering from leucocythæmia. I am indebted to Dr. R. T. Edes, of Boston, for information regarding a case published by him in the "Boston Med. and Surg. Journal" for July 27, 1871. The patient was a boy fifteen years old. As he came under observation only a few days before he died, but little is recorded of his previous history, but we are told that he manifested all the symptoms of leucocythæmia, including enlargement of the spleen and lymphatic glands, hæmorrhages, etc. The autopsy sustained the diagnosis in every respect. The spleen was much enlarged, and "the blood was about two thirds white corpuscles." The condition of the penis does not seem to have been investigated. In this case the first symptom of the disease was obstinate priapism. Its duration is not specified.

The second case was brought to my notice by Dr. F. Salzer, of Worms, Hesse-Darmstadt, from whose article upon this subject I have already quoted. The case is found in Rokitansky's "Lehrbuch der path. Anatomie" (1861), vol. iii, p. 407. Dr. Salzer published a second communication upon this subject in the "Berliner klin. Wochenschrift," 1879, No. 46, in which he gives the circumstances of this case. It is of special importance because Rokitansky gives the results of a carefully conducted autopsy. The patient was a cab-driver of Vienna, forty-two years of age, in whom priapism persisted six weeks. At its commencement it was accompanied by fever and great pain; there was at the same time a subcutaneous abscess in the left hypogastrium. Just before the death of the patient, pressure upon the root of the penis caused a discharge of pus from the urethra. The fever continued, dysentery developed, an abscess made its appearance in the perinæum, and the man died in a condition of very aggravated anæmia. At the autopsy, there were numerous evidences of leucocythæmia, as will appear. The great vessels, especially the pulmonary arteries, were filled with soft clots, which were yellowish-green in the middle, and at the periphery of a dirty-brown color. The liver was large, of a pale brownish-red color; the spleen was of five or six times its normal size, brownish-red in color, and contained two small abscesses. The corpora cavernosa were swollen and fluctuating; the spongy tissue of which they were composed was filled with pus, and the tissue itself softened in places and breaking down. Their fibrous sheaths were destroyed in places, and there existed free communication between abscesses which were found in the prostate and surrounding the membranous and bulbous portions of the urethra.

This case, as Dr. Salzer admits, speaks strongly in favor of the theory of a mechanical cause of the priapism, as claimed in my previous paper upon this subject. The persistent erection, which clearly was caused by a filling of the meshes of the corpora cavernosa and corpus spongiosum with pus, might equally well arise from an accumulation of blood in the same situations. Dr. Salzer is still inclined to believe that there are other cases in which the cause must be considered purely a nervous irritation.

The last case that I have to add is one which is recorded in the "Medical Record" for August 14, 1880, by Dr. G. F. Wetherell, of Lyons, Iowa. His patient was an American boy, nineteen years of age, who was engaged in farm labor. He had suffered from malarial cachexia for several years, and also for some time previously from caries of the tarsal bones of one foot. Priapism began on the 8th of September, 1870, and continued for five weeks. During the first twenty days of the attack the erection was very painful, and was accompanied by fever. Micturition was always easily accomplished. The spleen was greatly enlarged, and the cervical glands were prominent and indurated. The heart's action was irregular, but there was no organic disease of that organ. Epistaxis occurred twice during the continuance of the priapism. He was treated by quinine and iron and anodynes, and locally by warm and cold applications. Though no examination of the blood was made in this case, we are justified in believing it to have been one of leucocythæmia. Eleven months subsequently the boy died from the disease.

This makes, then, the tenth case that has been recorded in which persistent priapism has been a prominent symptom in leucocythæmia.

◆

Editorials.

CONSUMPTION GERMS AS MEAT AND DRINK.

WHATEVER attention may have been given to the questions of the inoculability of tubercle and of the possibility of contracting consumption by infection—and no little thought and experiment have been devoted to them—scarcely anything has been done in the way of investigating the transmissibility of tuberculosis through the medium of the ingesta. The public is tolerably well imbued with fairly correct ideas as to the unwholesomeness of certain sorts of diet; these ideas are somewhat vague, however, and the general conception of the unfitness of particular specimens of meat as food, when indeed it includes the consideration of anything further than putrefactive change, as it rarely does, seldom goes beyond the thought of some acute disease or some parasitic affection on the part of the slaughtered animal. As to drink, barring the ill repute of "swill milk," we are not aware that the natural liquids drunk by mankind have fallen under any particular suspicion, except as to their contamination with extraneous matter.

It seems now, however, that cows' milk, fresh from the udder, is capable of conveying tubercular disease. Certain experiments in Germany, which seemed to show this to be a fact, having gone unheeded, they have lately been repeated in France by M. Peuch, as we learn from the "Gazette Médicale de Paris," and his investigations were brought before the Académie des Sciences, at a recent meeting, by the well-known veterinarian, M. Bouley. M. Peuch caused two pigs and two rabbits to be fed upon the milk of a phthisical cow, and, while the details are not given, we are told that the results tended to demonstrate the transmissibility of phthisis in this manner. At the same meeting M. Bouley showed portions of the lung, the liver, the spleen, the diaphragm, and the bronchial and submaxillary glands of a pig that had been killed sixty-seven days after having been inoculated with the juice pressed from pieces of the ischio-tibial muscles of M. Peuch's tuberculous cow. The specimens showed very advanced tubercular lesions.

M. Peuch proposes to investigate the question of whether the infective quality of milk from tuberculous animals can be destroyed by boiling. This is not the only question that arises; and, indeed, from a scientific point of view, we must wait for further experiments, and for the interpretation of their results in the light of collateral facts, before deciding that milk from a tuberculous subject is apt to convey consumption. Practically, however, it is our clear duty to assume for the time being that these experiments prove what they seem to prove, and to advise those under our care, especially where bottle-fed infants are concerned, to spare no pains to secure their supplies of milk from cows known to be healthy, or, where the condition of the cows can not be ascertained, to resort to the protection probably afforded by boiling the milk. In France raw meat is much used in the treatment of anæmia; hence, at the meeting referred to, special care was urged in regard to the inspection of animals destined for the butchers. Even with us there is need enough for just this sort of precaution, but, in view of the fact that we rarely eat raw meat, we probably have less to fear from this method of infection than the nations of continental Europe.

What we know of syphilis ought long ago to have disabused our minds of the dogma that the physiological secretions can not, in the absence of a specific lesion in the secretory tracts, become tainted with products peculiar to any chronic diathetic disease affecting the individual furnishing them.

Confirmation of M. Peuch's deductions will go far to break the hold of this dictum, and will perhaps temper the ardor with which men will seek for lesions in the mouths of syphilitic circumcisors.

◆

Reviews and Literary Notes.

Antiseptic Surgery; an Address delivered at St. Thomas's Hospital, with the Subsequent Debate, etc. By WILLIAM MACCORMAC, A. M., F. R. C. S. E. and I., M. Ch. hon. caus., etc. London: Smith, Elder & Co., 1880. Pp. xi–286.

THE title-page of this volume indicates its contents clearly; and the reader will find that the author has produced a book whose perusal can not fail to be of the greatest interest and profit. Now that Lister's method has been adopted by the majority of German surgeons, and its brilliant results have been recorded, and its details described by both German and French writers, it is time that English surgeons who are convinced of its superiority should speak with the authority which their words always convey to the English-reading profession. Mr. MacCormac is an ardent advocate of Lister's method, and he supports his views by an elaborate collection of statistics. At the same time he allows the enthusiasm, which is sure to be engendered in the reader's mind by his clear and forcible arguments, to be tempered by the views of other surgeons, advanced in the debate which followed the reading of his paper. In our Quarterly Reports on Surgery we have given very full abstracts of this debate, and we therefore feel it unnecessary to present Mr. MacCormac's facts and views at length in this notice, but will content ourselves with pointing out a few of the excellences of the last part of the volume, and urge every practitioner who wishes to acquaint himself with this question, from the point of view both of its supporters and of its antagonists, to read the work for himself. It may be interesting, however, to note, in passing, that all the surgeons who participated in the debate agreed that the antiseptic method was an efficient safeguard against septic wound-diseases; and that, while Mr. MacCormac, Mr. Spencer Wells, Mr. Barwell, Mr. John Wood, and Mr. MacNamara thought it the best method, and its details necessary to the accomplishment of the best results, Sir James Paget, Mr. Hutchinson, and Mr. Bryant were satisfied with some of its modifications, and doubted the validity of the argument exclusively from statistics.

The last two hundred and eighty pages of the volume are devoted to describing the materials, and the method of using them in all kinds of wounds. On page 3, Mr. MacCormac writes of Lister's method: "It has not, I think, thus far been improved upon by others in any essential feature." Hence it is not surprising to find that he has been most painstaking and thorough in giving all the details that belong to this method, and its materials. Its modifications, notably the use of thymol, salicylic acid and boracic acid, Maas's acetate-of-alumina dressing, Neuber's decalcified bone-tubes, and the carbolized jute, receive ample notice, while every essential feature of Lister's latest practice is dwelt upon. The surgeon who has often been perplexed to carry out this practice in wounds of unusual size, or in unusual situations, will be delighted with the chapter on "Antiseptic Practice." Many practical hints are given for the dressing of abscesses, compound fractures, amputation-stumps, and wounds of the abdomen, of the head, and of the larger joints, together with many practical points that have stood the test of experience in the management of cases of ovariotomy, the radical cure of hydrocele and hernia, and in operations on the contents of the abdominal cavity. Not a few cases of extraordinary interest are quoted, and the text is accompanied by many serviceable illustrations. Such a volume is needed by every surgeon; and careful study of its pages ought not only to increase interest in Lister's method, but actually to bring about better results in surgical practice.

Lessons in Gynæcology. By WILLIAM GOODELL, A. M., M. D., Professor of Clinical Gynæcology in the University of Pennsylvania, etc. With ninety-two illustrations. Philadelphia: D. G. Brinton, 1880. Pp. 454.

THIS appears to be a second edition, although it is not so stated upon the title-page. As but little more than a year has elapsed since the first edition was published, the work has evidently met with considerable favor. It is not a formal treatise, but a collection of some of the author's lectures—chiefly clinical. Now, the clinical lecture gives one an opportunity to present the salient points of his theme while passing over a good deal of subsidiary matter; and at the same time it seems to warrant one in dwelling upon practical points of detail which the writer of a treatise is apt to overlook or to regard as trivial. This forms the main value of oral teaching; and this book, precisely because it does include and lay stress upon just such points, we regard as one of peculiar value to the student and to the young practitioner. Its descriptions of gynæcological manipulations are clearer, we think, than those of any other in the English language. As a particular example, we would refer to the instructions in regard to the introduction of the Hodge pessary. So, too, the portions relating to pathology and diagnosis are such that the reader can not fail to get a clear idea of those matters. Not only is Dr. Goodell exceptionally successful in presenting his subject intelligibly, but the views that he upholds seem to us, in the main, most judicious; especially, as regards the latter consideration, we would commend his teachings upon the inflammatory affections.

While, however, the book has all these points of excellence, we think its general tone is such as might lead the inexperienced reader to count too much upon the tolerance of the pelvic organs, and to resort to too perturbative methods of treating some of the diseases of women. We confess, for instance, that we should be very sorry to see divulsion of the uterine canal generally made use of in the treatment of flexions. We would especially enter our protest against such teaching as this (p. 119): "I have come to the conclusion that he is the most successful gynæcologist who is intelligently the most plucky; and that, no matter how severe or how mild the treatment of uterine disorders, the percentage of accidents will be about the same, and that a very low one."

Dr. Goodell's style is always clear and generally forcible, but verges at times upon coarseness and levity—blemishes that may be overlooked in spoken words, but that nothing can justify one in perpetuating in a medical book. This is but a minor point, however, and we would repeat that, except for its leaning to the *quid nimis* in matters of treatment, the book is one of very great worth.

Carlsbad and its Natural Healing Agents, from the Physiological and Therapeutical Point of View. By J. Kraus, M. D., Consulting Physician at Carlsbad. With notes introductory by the Rev. John T. Walters, M. A. Second edition, revised and enlarged. London: Trübner & Co., 1880. Pp. 103.

We presume that few American physicians know more of the Carlsbad "healing agents" than that the water of the Sprudel Spring is reputed to possess peculiar virtue for the relief of persons subject to gall-stone colic. We wish we could assure our readers that a perusal of this work would add materially to their stock of knowledge upon this subject. We are inclined to think that, without our taking upon ourselves any such responsibility, the following quotation will enable them to settle the question for themselves: "Special action of the Carlsbad waters. *A. By coming into immediate contact with the mucous membrane of the stomach and intestinal tract, the waters act*—(*a*) As soothing, invigorating, and regenerating agents on the nerves of the stomach; whence the increased appetite and the pleasant, warm sensation propagating itself from the stomach over the whole surface of the body. (*b*) In a healing way in cases of simple erosions and ulcers of the mucous membrane of the stomach and duodenum. (*c*) As correctives of the too abundant secretion of acid in the intestinal tract. (*d*) As gentle purgatives and accelerators of the peristaltic action, removing the viscid mucous secretion, and mechanically dissolving the hard and dried-up fæces; as a general result of these influences, the mucous membrane of the intestinal channel is energetically stimulated to increased secretion. *B. Being absorbed by the blood, the waters act*—(*a*) By dissolving the concentrated and obstructed bile contained in the biliary ducts. (*b*) By changing the condition of the blood, which, in its venous state, principally stagnates in the mesenteric vein and its branches; thus the waters regulate and increase the venous, and consequently also the arterial circulation. (*c*) By relieving the lymphatic glands and vessels of the thick and concentrated lymph contained in them. (*d*) By removing the fat accumulated in the subcutaneous areolar tissue and other organs, and by causing old inflammatory residues (for instance, in the peritoneal cavity) to be absorbed."

Some years ago such statements as these, unaccompanied by the slightest show of proof, would have passed current, as they would have been in keeping with the general run of medical literature. They are excusable now in works intended for the general public, as this one is; but no book written in this way is of the slightest value to the profession. The author, indeed, seems to be of the same way of thinking, for he promises us a supplementary work of a clinical character. That he will therein make a positive contribution to our knowledge of the action of mineral waters, we are quite willing to trust—none the more so, however, for the Rev. Mr. Walters's "notes introductory," in which, doubtless with the best of motives, he loads Dr. Kraus down with injudicious laudation, and characterizes the will hang down without touching the ground, and by its weight exert a constant extending force. The patient is then allowed to go about on crutches. Nature provides the necessary fixation. This is the whole treatment. It is certainly simple, easily applied, and costs but a few dollars. Does it meet all the requirements? We think that as much extension is obtained in this manner as with the use of the long splint; and, if certain accidents could be provided against, this method of treating cases of hip-joint disease would supersede all others. There is much more danger of injury to the joint from falls with a high shoe and crutches than with the long splint.

We tried this plan in some cases, but did not find that it gave the relief that the long splint did, and in two cases the nocturnal pains returned, and we re-applied the old apparatus. It also seems to us that the weight of the body is more easily borne on a perineal strap than on crutches, and that patients get about with the former with less labor than with crutches. On the other hand, the cases reported in the book certainly speak well for the apparatus, and perhaps the occurrence of pain in our cases was merely accidental. We believe that the principle is correct; and, if it can be proved that the dangers from injury are more theoretical than real, a great advance will have been made in the treatment of disease of the hip-joint.

We have extended our remarks so that there remains but little space to more than mention what remains of the book. For disease of the knee- and ankle-joint, splints, made of felt saturated in shellac, are molded to the limb, and worn all the time. The sound limb is elevated in the same manner as for hip-joint disease, and the patient allowed to go about on crutches. In disease of these latter articulations, compression is added to extension and fixation.

The part on club-foot contains nothing new, and therefore requires no notice. There is such a mania at the present time for devising elaborate and expensive apparatus for the treatment of orthopædic cases, that we hail this little volume as a harbinger of better things, and a tendency toward simplification in the management of deformities; and we think that the author has done a good work in calling the attention of the profession to this simple way of managing disease of the joints of the lower extremities. We cordially agree with his views in regard to fixation and extension, and trust that our fears of injury to the joint from falls may prove unfounded.

The Influence of School Life upon the Eyesight, with Special Reference to the Public Schools of Dayton. By W. J. Conklin, M. D., etc. Submitted to the Board of Education, March 12, 1880. Printed by Order of the Board. Dayton, O., 1880. Pp. 32.

This brochure is the result of the examination, by a committee, of the school-rooms of Dayton, with reference to those conditions of school life that tend to impair the sight of pupils, and to determine whether weakness of sight is to any extent prevalent among the pupils of the public schools. The author reviews very briefly the facts that have been elicited by similar examinations made in this and other countries, and points out that it is probable that in some instances the percentage of myopia is too high, owing to the accidental grouping of myopes in a particular room or division. He finds, as other investigators have done, that the percentage of short-sightedness increases, as a rule, proportionately with the advancement in the school grades. All the schools in Dayton were examined with reference to all the causes which predispose to the development of myopia, such as inheritance, impure air, improper food, defective light, bad type, pale ink, prolonged use of the eyes without intermission, faulty position of the body, faulty construction of school furniture, etc.

Dr. Conklin found that the majority of the school buildings were defective in ventilation and in illumination. In many of the school-rooms the light was insufficient and ill arranged, the proportion of window-surface to floor-surface being considerably below the standard generally regarded as sufficient. The position of the windows was bad, and they did not reach far enough toward the ceiling. More space and care are devoted to the discussion of the effects of prolonged tension, of accommodation, and those of a faulty position in studying, which are probably the most important points of the subject. The whole closes with an appeal to the members of the Board of Education to recognize the importance of making some provision for instructing the teachers in the fundamental principles of school hygiene.

A Practical Treatise on Sea-sickness; its Symptoms, Nature, and Treatment. By George M. Beard, A. M., M. D., etc. New York: E. B. Treat, 1880. Sm. 8 vo., pp. v–74.

The claim of this treatise to be "not a theory or dream," but to represent extensive experimental research and experience, does not add to the comfort of the unfortunate subjects of this malady, so hard to bear, yet so likely to excite amusement rather than sympathy in the thoughtless spectator. If we hold with some, who perhaps lack scientific enthusiasm, that a remedy should not be harder to endure than the symptoms it is addressed to, we may well defer the adoption of the heroic methods imperatively dictated by Dr. Beard until milder means have been tried.

His plan is, that those who are about to incur liability to this disorder should seek the advice of "an expert" some days before starting, and should at once be brought into a condition of *bromization*, by taking thirty to ninety grains of the bromide of sodium three times a day, to be kept up till weakness of the limbs, dullness, stupor, tendency to sleep by day and night, and to fall asleep easily at any time, indicate "a state where there is little likelihood of being sea-sick!" We should say, also, a state where little concern would be felt whether sea-sickness occurred or not! Dr. Beard is not deterred by the remembrance of having, by giving one hundred grains of bromide of potassium in two hours to a specially exhausted patient, produced "acute bromism, beginning with giddiness, and a reeling gait; and in less than an hour from the time the medicine was taken, the patient was unable to walk alone, and was for two hours unconscious, with muscular spasms that required vigorous treatment by electricity, ice at the back of the neck, and bottles of hot water at the feet. This patient was not sea-sick; she was simply nervous, and the bromide was given merely to calm the nerves."

If, in spite of the *bromization*, the patient complains of sea-sickness, and especially if he vomits, Dr. Beard injects hypodermically enough "solution of atropia to produce great dryness of the throat." That this makes it "very difficult to swallow" is less important if, as in the author's own case, there is "but little desire for eating" after the dose; and if, also as in his own case, the patient "could not see to read on account of the paralysis of the muscles of accommodation" thus induced, there would be nothing to distract the attention from full enjoyment of the effects of the remedies.

Caffeine and cannabis indica are directed to be used for the symptom of headache; and they complete the list of remedies, except those which are mentioned only to be condemned, such as chloral (which, however, he states to be "really a stronger bromide, being more of a narcotic, while the bromides are sedatives"), nitrite of amyl, opium, and phosphoric acid. Liquors and champagne are put in the same category, as doing no good but much harm. Those who have experienced the unspeakable comfort and sustenance which champagne and some other effervescent liquors often afford, will hardly agree with the author in this.

It will scarcely be credited that there is in this work no mention of the benefit and comfort derivable from the horizontal posture in sea-sickness. Dr. Beard remarks that to lie in the berth with the head low, from the moment of starting, is "needless, as well as impracticable." The choice of situation on shipboard will depend on the weather, on individual taste, condition, and so forth; but that many persons can live comfortably, eating, digesting, and using their minds, simply by lying down, and only trying to regain the power of steady locomotion by degrees, is too well known, we believe, to require proof.

Dr. Beard, though he states that "the philosophy advocated in this work is that sea-sickness is a *functional disease of the central nervous system*," does not seem to have formed any very clear notion about it. He says, "Vomiting is one of the symptoms of concussion of the brain; in sea-sickness there is a series of mild concussions." There can be little doubt that the seat of the irritation, or interference with normal action, causing sea-sickness, is the same nervous tract affected in Ménière's disease. Mechanical disturbance of the organs of balancing and coördination of motion generally, whether external or internal, induce vomiting, subjective impressions described as giddiness, helplessness, etc., and we can safely associate sea-sickness directly with the struggle of these organs to accommodate themselves to new and unusual conditions.

Dr. Beard does not comment on the letter of his friend, Dr. Hutchinson, of Providence, printed at the end of the book, who finds no difficulty in curing sea-sickness with ten grains of bromide of sodium, and one tenth of a grain of ipecac, in powder, put into a tumblerful of water, of which a teaspoonful is given every ten minutes. His results do not appear to have been at all inferior to Dr. Beard's. We can not avoid the conclusion, to be drawn even from the book as it stands, that mild methods and common-sense practice may be tried to advantage, even if Dr. Beard should prove to have suggested useful remedies for cases otherwise refractory. *Sea-sickness often gets well of itself.*

The Diagnosis of Diseases of the Spinal Cord. An Address delivered to the Medical Society of Wolverhampton, October 9, 1879. By W. R. Gowers, M. D., F. R. C. P., etc. With additions and illustrations. London: J. & A. Churchill, 1880. Pp. viii–80.

Dr. Gowers's address is so clever, so concise, and withal so scientific in its simplicity, that we have everything to praise and nothing to find fault with. The author has a systematic method of handling the abstruse questions of neurology which is exceedingly attractive. We notice that a large amount of space is given to the consideration of the tendon-reflex. The book bristles with practical points, and should be read by every one who has occasion to treat nervous diseases.

Treatise on Therapeutics. Translated by D. F. Lincoln, M. D., from French of A. Trousseau and H. Pidoux. Ninth edition, revised and enlarged, with the assistance of Constantin Paul. Vol. I. New York: William Wood & Co., 1880. Pp. iv–302. [Wood's Library of Standard Medical Authors.]

This volume contains the chapters on reconstituents, astringents, alteratives, and irritants, of Trousseau and Pidoux's well-known "Traité de Thérapeutique," which has just reached its ninth French edition. As a prelude to the discussion of reconstituent remedies, the authors devote a few pages to the expression of their views with reference to chlorosis. Then follows a very thorough discussion of the action of tonic remedies in general, each receiving special notice further on.

A marked feature of the work is the clear manner in which specific and detailed directions are given for regulating the modes of administration in particular affections. The authors are not content with giving a list of diseases in which a drug may be used with benefit, but, taking up each malady by itself under a separate head, call attention to those preparations, doses, combinations, etc., which are peculiarly applicable. In this manner innumerable practical suggestions are made, which are very valuable, and which are not found in most books. The discussions of the modes of operation of reconstituents, astringents, alteratives, and irritants in general are very well written, the views expressed being broad and suggestive. The general style of the work is more thorough and exhaustive than that of most books on the subject; full and satisfactory exposition of theory is invariably followed by most careful attention to matters of practical importance.

The translation is good, and the work will be valuable to the practitioner, as well as to the student who cares to go beyond the limits of rudimentary materia medica. It is to be regretted that the excellent appearance of the volume is marred by an error on the title-page—that of misspelling M. Paul's name.

A System of Medicine. Edited by J. RUSSELL REYNOLDS, M. D., F. R. S. With numerous Additions and Illustrations by HENRY HARTSHORNE, M. D. In three volumes. Vol. III. Diseases of the Digestive, Blood-glandular, Urinary, Reproductive, and Cutaneous Systems. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. 990.

IN this volume Dr. Hartshorne has added articles on Cholera Morbus, Cholera Infantum, Trichina Spiralis, Bronchocele, Progressive Pernicious Anæmia, and Spermatorrhœa. Numerous additional notes are found throughout the book, whenever and wherever the American editor has seen such to be necessary, from recent discoveries in and advancing knowledge of the several diseases. The principal illustrations are the woodcuts representing the lesions in ulceration of the bowels and in dysentery, copied from the second medical volume of the "Medical and Surgical History of the War of the Rebellion." We take pleasure in commending this edition of Reynolds's "System of Medicine."

Pathogenetic Outlines of Homœopathic Drugs. By Dr. Med. CARL HEINIGKE, of Leipzig. Translated by EMIL TIETZE, M. D., of Philadelphia. New York: Boericke & Tafel, 1880. Pp. viii–576.

So far as we know, this is the first practical attempt to separate what is useful from what is useless in the homœopathic materia medica. The attempt is creditable, and the work is certainly freer from trash than any other text-book on the same subject, unless we except Hughes's "Pharmaco-dynamics"—a little book with a long name. Heinigke treats of drugs from the same standpoint that Hughes has taken, and in his arrangement of the symptoms produced by drugs he selects mainly those that appear to be founded on some definite pathological condition or lesion, rejecting most of the mental hallucinations that form the bulk of homœopathic literature on this subject. As an effort to base the practice of homœopathy upon an intelligible materia medica, it is to be commended, and without doubt, with all the imperfections that are inseparable from a work of this kind, it will be a valuable reference-book for the more intelligent portion of the homœopathic fraternity.

A Guide to the Practical Examination of the Urine. By JAMES TYSON, M. D. Third edition, revised and corrected, with Illustrations. Philadelphia: Lindsay & Blakiston, 1880. Pp. 184.

THE third edition of this convenient little book follows so close upon the second that but few alterations have been necessary. For the discussion of different theories upon mooted questions the reader will be obliged to refer to larger and more exhaustive works; but the omission of everything abstruse or controversial has made it possible to put everything of practical importance in a very available form. The descriptions of the different tests are quite clear and accurate, and are agreeably supplemented with many valuable suggestions which are the results of the author's own experience. The subject of urinary deposits is well illustrated. The author covers his ground thoroughly, and the result is a very useful and handy little volume.

Common Mind-Troubles and The Secret of a Clear Head. By J. MORTIMER GRANVILLE, M. D., M. R. C. S., etc. Edited, with additions, by an American Physician. Philadelphia: D. G. Brinton, 1880. Sm. 8 vo., pp. 185.

THIS author is well known in London from his work on "The Care and Cure of the Insane," based on material originally published in "The Lancet," and as editor of Wynter's "Borderlands of Insanity." The present volume consists of two distinct but complementary works. They are not addressed to the specialist, but are intended to guide the public in the prevention and the relief, in the beginning, of mental trouble, especially by means of the power of the will. Dr. Granville has great confidence in the efficacy of voluntary effort, when applied to the stage of conscious embarrassment, which he thinks generally precedes mental derangement. Whether he over-estimates the results attainable in this way, or not, the advice which he gives is good, and all may read the books with profit. This applies to no parts more fully than to the chapters on "Mental Languor" and "Morbid Fear," written by the editor.

Health and Healthy Homes; a Guide to Domestic Hygiene. By GEORGE WILSON, M. A., M. D., Medical Officer of Health for Mid-Warwickshire Sanitary District, etc. With notes and additions by J. G. RICHARDSON, M. D., Professor of Hygiene in the University of Pennsylvania, etc. Philadelphia: Presley Blakiston, 1880. Pp. 314.

IT would be well if all quasi-medical books designed for the general public were written by such competent men as Dr. Wilson, who is already widely and favorably known in this country by his "Handbook of Hygiene and Sanitary Science." The present volume, while treating to a certain extent of the same subjects, yet gives such additional applications of sanitary science that it may be looked upon as supplementary to its predecessor—neither quite taking the place of the other, but both together affording a means of sanitary education highly valuable to those who recognize the duty of taking care of their own health, and doubly so to those who, as heads of families or in any other way, are charged with looking after the health of others.

One of the drawbacks attending the general heightening of interest in matters of hygiene among the community during the past twenty years has been the publication of a good deal of trash upon just such matters as are treated of in this book; and it is therefore all the more agreeable to find that in this instance a work is offered, every portion of which a person of ordinary understanding and acquirements may read with profit. Dr. Richardson's additions, in the form of foot-notes, are brief and not very numerous, but they are in all respects excellent. Not the least merit of the book is that it is written in an easy and agreeable style. We may add that the American publisher has put it forth in a very pleasing form.

Alcohol; its Function and Place: a Lecture delivered, etc. By THOMAS R. FRASER, M. D., F. R. S., Professor of Materia Medica in the University of Edinburgh. With Diagrams and Tables. Edinburgh: David Douglas, 1880. Pp. 38.

THIS lecture was given before a temperance society, and it is a strong argument in favor of temperance in the use of alcoholic drinks; all the stronger from the fact that it is not itself intemperate. The salient points of what is known in regard to alcohol as a food, as a medicine, and as a poison, are given in a way to be easily grasped by any reader of good general information; and we doubt not that there are many physicians whose knowledge of the subject would be enhanced by reading it; and this sort of knowledge is precisely what a practitioner ought certainly to be able to avail himself of in every-day practice.

The Management of Children in Sickness and in Health. A Book for Mothers. By AMIE M. HALE, M. D. Philadelphia: Presley Blakiston, 1880. Small 8vo, pp. 110.

WE began the perusal of this little book with a prejudice against it, since most of the manuals of this sort are utterly worthless. On examination, however, we find it very praiseworthy in its matter, and very clear and agreeable in its style. We have no doubt that, were it to be widely read by those having the care of young children, the effect would prove in every way wholesome.

The Black Arts in Medicine, with Anniversary Address. By JOHN D. JACKSON, A. M., M. D., etc. Edited by L. S. MCMURTRY, A. M., M. D. Cincinnati: Robert Clarke & Co., 1880. Pp. 74.

THIS exposition of the "black arts," by which men push themselves ahead of their betters, may prove of much service, should it find its way into the hands of those who, against their better instincts, fancy themselves forced to resort to these arts in order to succeed. For others it is a bit of agreeable reading that will go far in consoling them for any temporary advantage which their unscrupulous rivals may gain over them.

The Pharmacopœia of the British Hospital for Diseases of the Skin, London. Second edition. Edited by BALMANNO SQUIRE, M. B. (Lond.), etc. London: J. & A. Churchill, 1880. Small 8vo, pp. 92.

THE reader will find in this little book, edited by the senior surgeon of the British Hospital for Diseases of the Skin, a well-arranged collection of formulæ that have been found useful in the treatment of skin diseases, either by internal administration or by topical application.

A Text-Book of Physiology. By M. FOSTER, M. A., M. D., F. R. S., Prælector in Physiology and Fellow of Trinity College, Cambridge. From the third and revised English edition, with notes and additions, by EDWARD T. REICHERT, M. D., Demonstrator of Experimental Therapeutics, University of Pennsylvania. With two hundred and fifty-nine Illustrations. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. xxiii–1030.

THE English edition of this well-known work has already been reviewed in this JOURNAL. The American differs from it chiefly in the fact that an attempt has been made to supply for the benefit of students the stepping-stones by which Dr. Foster mounts to the higher walks of physiology. This has been done by copious explanatory notes and illustrations. The book is too high in its scope for a college text-book. It is strong meat for advanced scholars, and in this lies its chief charm and value. All of physiology can not be crowded between the covers of one volume, and of elementary works we have all that seem to be required.

Surgical Diagnosis of Tumors. By Professor A. LÜCKE, Strasburg. Translated by A. T. CABOT, M. D. Boston: A. Williams & Co., 1880. Pp. 43.

THE translator has done a real service in bringing this little monograph within the range of practitioners not familiar with the German language. It is a clear statement of the points on which surgeons are in the habit of basing their diagnosis of the character of new growths before they have been examined under the microscope, and as such it can not fail to be of value. Though by no means as complete or exhaustive as it might have been made, it contains many useful hints, and shows how much may be learned with regard to the nature of a tumor from a careful study of its history merely from a clinical standpoint.

Modern Medical Therapeutics. A Compendium of Recent Formulæ and Specific Therapeutical Directions, from the practice of eminent contemporary physicians, American and foreign. By GEORGE H. NAPHEYS, A. M., M. D., etc. Seventh edition, enlarged and revised. Philadelphia: D. G. Brinton, 1880. Pp. 604.

JUDGING from the fact that this book has reached its seventh edition, there can be no doubt that a great many individuals regard it as of service. We can only hope that they look upon it rather in the light of an index, than as a makeshift to enable them to get along without a systematic knowledge of therapeutics.

Student's Aids Series. New York: G. P. Putnam's Sons, 1880. Sm. 8vo.

(1.) *Aids to Physiology.* By B. THOMPSON TOWNE, F. R. C. S., Eng. Pp. 104.

(2.) *Aids to Chemistry.* By C. E. ARMAND SEMPLE, B. A., M. B., Cantab., M. R. C. P., Lond. Parts i, ii, and iii. Pp. 72, 60, and 114.

(3.) *Aids to Materia Medica and Therapeutics.* Part ii. By C. E. ARMAND SEMPLE, B. A., M. B., etc. Pp. 152.

THESE little volumes contain a good deal that is likely to serve the purpose of a student cramming for an examination, but such books are not to be recommended. They are prettily bound, but the printing does not compare favorably with that generally done by the Messrs. Putnam.

The Medical Register of New York, New Jersey, and Connecticut, for the Year commencing June 1, 1880. Published under the supervision of the New York Medico-Historical Society. WILLIAM T. WHITE, M. D., Editor. Vol. XVIII. New York: G. P. Putnam's Sons, 1880. Pp. xciii–264.

THIS volume—indispensable to every physician living in New York or its immediate neighborhood—differs little from its annual predecessors. We would commend the unusual punctuality with which it appeared this year, and the continued evidence it shows of the care with which it is compiled.

The American Armamentarium Chirurgicum. New York: George Tiemann & Co.

THIS large volume amounts almost to a cyclopædia of the mechanical appliances used in our art. It is very accurately compiled and profusely illustrated. The prices of the various instruments, etc., are stated, a general idea of their character is given in the cuts, and in many instances elaborate descriptions are presented, not only of the instruments themselves, but of the methods of using them. It must be particularly useful to those who are unable to visit the instrument shops frequently.

BOOKS AND PAMPHLETS RECEIVED.—The Microscopist: a Manual of Microscopy, and Compendium of the Microscopic Sciences; Micro-Mineralogy, Micro-Chemistry, Biology, Histology, and Practical Medicine. Fourth edition, greatly enlarged, with 252 illustrations. By J. H. Wythe, A. M., M. D., Professor of Microscopy and Histology in the Medical College of the Pacific, San Francisco, Cal. Philadelphia: Lindsay & Blakiston, 1880. Pp. 434. [Price $5.00.] ═══ Traité d'Anesthésie Chirurgicale, contenans la description et les applications de la méthode anesthésique de M. Paul Bert. Par le docteur J. B. Rottenstein, Membre de l'Académie Leopoldina Carolina, etc. Avec 41 figures intercelées dans le texte. Paris: Germer Baillière et Cie., 1880. Pp. xi–428. ═══ The Pathology, Diagnosis, and Treatment of Diseases of Women, including the Diagnosis of Pregnancy. By Graily Hewitt, M. D., London, F. R. C. P., Professor of Midwifery and Diseases of Women, University College, etc. Third American, from the third London edition, revised and enlarged, with 132 illustrations. Philadelphia: Lindsay & Blakiston, 1880. Pp. xxii–751. [Price, cloth $4.00; leather $5.00.] ═══ Fracture of the Patella: a study of one hundred and twenty-seven cases. By Frank H. Hamilton, A. M., M. D., LL. D., Visiting Surgeon to Bellevue Hospital, etc. New York: C. L. Bermingham & Co., 1880. Pp. 106. ═══ On the Educational Treatment of Incurably Deaf Children. By W. B. Dalby, F. R. C. S., M. B. (Cantab.), Aural Surgeon to St. George's Hospital. London: J. & A. Churchill. Pp. 15. [Price 6d.] ═════ Treatise on Therapeutics. Translated by D. F. Lincoln, M. D., from French of A. Trousseau, Professor of Therapeutics, etc., and H. Pidoux, Member of the Academy of Medicine, etc. Ninth edition, revised and enlarged, with the assistance of Constantin Paul, Professor Agrégé, etc. Volume II. New York: William Wood & Co., 1880. Pp. vi–299. ═════ The Practitioner's Handbook of Treatment; or, the Principles of Therapeutics. By J. Milner Fothergill, M. D., Member of the Royal College of Physicians of London, etc. Second American, from the second English edition, enlarged. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. 647. ═════ L'Apomorfina, Azione ed Usi. Del Dott. C. Ruata. Padova: Tipografia del Seminario, 1880. Pp. 81. [From the author.] ═════ The Student's Dose Book and Anatomist, combined. By C. Henri Leonard, A. M., M. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology, Michigan College of Medicine, etc. Detroit: Leonard's Illustrated Medical Journal, 1880. 12mo, pp. 60. [Price $1.00.] ═════ Proceedings of the Connecticut Medical Society, 1880, etc. Hartford, 1880. Pp. 194. ═════ Transactions of the Medical and Chirurgical Faculty of the State of Maryland, Eighty-second Annual Session, held at Baltimore, Md., April, 1880. Pp. 216. ═════ Transactions of the American Dermatological Association, with the President's Address, at the Third Annual Meeting .... New York, August 26, 27, 28, 1879. New York, 1880. Pp. 100. ═════ Minutes of the Twenty-fourth and Twenty-fifth Annual Meetings of the State Medical Society of Kentucky, 1879 and 1880. Louisville, 1880. Pp. 27. ═════ Eighth Annual Report of the Board of Health of the City of Boston, for the financial year 1879–'80. Boston, 1880. Pp. 120. ═════ Official Register of Physicians and Midwives, to whom certificates have been issued by the Illinois State Board of Health, etc. Springfield: Weber & Co., 1880. Pp. 252–xxxiv. ═════ Trustees, Faculty, and Graduates of Detroit Medical College, etc. Detroit, 1880. Pp. 15. ═════ The Conditions of the Unipolar Stimulation in Physiology and Therapeutics. By A. De Watteville, Assistant-Physician to the Hospital for Epilepsy and Paralysis, Regent's Park. Pp. 20. [Reprint.] ═════ The De Lesseps Canal in its Relation to Hygiene. By G. Halsted Boyland, M. A., M. D., etc., late Surgeon French Army, etc. Baltimore, 1880. Pp. 18. [Reprint.—From the author.] ═════ Optico-Ciliary Neurotomy, etc. By Julian J. Chisolm, M. D., etc. [Reprint.] ═════ Sympathetic Affections of the Eye. By C. J. Lundy, M. D., etc. Pp. 12. [Reprint.—From the author.] ═════ Diabetic Cataract, Iritis, etc. By C. J. Lundy, M. D., etc. Pp. 11. [Reprint.—From the author.] ═════ What has been done by the Asylum Association in the interest of Scientific Psychiatry? By Edward C. Spitzka, M. D., etc. [Reprint.] ═════ Practical Hints relating to Yellow Fever Prevention. By Robert B. S. Hargis, M. D., Pensacola, Fla. [Reprint.—From the author.] ═════ The Mechanical Treatment of Cystocele and

Procidentia Uteri. By Eugene C. Gehrung, M. D., etc. [Reprint.—From the author.] ═══ Lacerations of the Neck of the Uterus. By A. Reeves Jackson, A. M., M. D, etc. [Reprint.—From the author.] ═══ Ten Cases of Litholapaxy. By William Warren Greene, M. D., Professor of Surgery in the Medical College of Maine, etc. [Reprint.—From the author.]

◆

Clinical Reports.

NEW YORK HOSPITAL.

AN UNUSUAL CASE OF SPINAL CONGESTION.

Reported by F. M. Townsend, M. D., House Physician.

(Service of Dr. W. H. DRAPER.)

Francis L. L., aged thirty-five, a printer, entered the hospital November 6, 1879, with the following history: One year ago he contracted a venereal sore, probably syphilitic, for, although no other secondary symptoms appeared, he suffered six months later with an obstinate sore-throat which was recognized and treated as syphilitic, a cure resulting in one month.

His recent illness dated from October 18th. At that time he began to suffer radiating pains in the lumbar region, with numbness, beginning in the toes and the sole of the right foot. No attention was paid to this until three days later, when the left foot became similarly affected. The numbness then rapidly advanced upward in both limbs, reaching the knees at the end of a week, and was accompanied with gradual loss of power in the legs, and severe boring pains in both tibiæ. In just two weeks after its onset, the disease had progressed so rapidly that the numbness had reached the umbilicus. The loss of power had become so great that the patient was unable to walk without assistance, and the pains in the limbs were so excruciating that sleep without hypnotics was impossible. The numbness then appeared in the finger-tips of both hands, and gradually extended to the wrists, where it remained stationary for two days; then, taking a sudden start, it invaded the whole of both upper extremities in less than forty-eight hours, and was accompanied with partial paralysis of the muscles, and with pain in the bones, as in the lower limbs. Four days before admission, he had retention of urine for the first time, but there was no loss of control over the rectum. He had never complained of formication, cincture pains, or spasms. Before entering here he had been given mercury and large doses of potassic iodide, both of which had failed to improve his condition.

On admission he was found pale and very anæmic, complaining of great pain in the limbs. The mind was clear and intelligent. There was marked paralysis of motion and sensation over the entire body below the neck, and slight atrophy of the calves of the legs. The loss of power was so great in the lower extremities that only flexion and extension of the toes could be performed; but in the upper limbs, which were less affected, the various movements of flexion, extension, pronation, etc., were accomplished slowly, and with considerable difficulty and slight incoördination. The dynamometer registered, r., 35–31; l., 28–30. Sensation of contact and of pain was almost entirely abolished in the lower limbs, and so diminished in the upper that the patient could just appreciate the two points of an æsthesiometer at a distance of 12 cm. There was no spinal tenderness. Sensation and motion in the head and neck were perfect. There was no headache or disturbed vision; the pupils were normal and reacted well. There was no disturbance of either pulse, respiration, or temperature. The sexual functions were abolished. The urine was of normal specific gravity, and contained a few hyaline casts, but no albumen.

On the supposition that the disease was of syphilitic origin, the patient was given potassic iodide, 3·325 grammes (50 grains), t. i. d. No mercury was administered, as salivation was already present. By the end of the first week of his stay in the hospital, the symptoms had become much worse. The loss of motion and sensation had become more marked, and the pains more severe. The dynamometer registered only, r., 15–20; l., 18–17—little more than half of that shown on admission; and a pin could be thrust into the legs and thighs without the patient perceiving it; but in the arms the prick could be felt, though not located, and the retardation of sensation was very marked. The pains, which indeed formed the chief source of complaint, were easily controlled in the beginning by 0·65 gramme (about 10 minims) of Magendie's solution hypodermically; but now they had become deep-seated and crushing in character, located chiefly in the wrist- and ankle-joints, and it was necessary to administer Magendie's solution, 2·65 grammes (about 40 minims), three and four times daily, in order to give even temporary relief. The mercurial fœtor and salivation had become much less, and the difficulty in micturition, which had rendered the use of the catheter necessary, disappeared after four days, and did not return. The iodide had been rapidly increased to 6·0 grammes (90 grains), t. i. d., but, as no benefit resulted from its administration, the syphilitic origin of the disease was doubted, and this plan of treatment was abandoned. On November 14th the patient was put on the use of fluid extract of ergot, 2·0 grammes (f ℥ ss) four times a day, with dry cupping along the sides of the spine *once* daily. At the end of the second week (November 20th), a slight return of sensibility was noticed in the legs, for he could just perceive the pricking of a pin; and the pains in the back and limbs had so diminished in severity that Magendie's solution, 1·0 gramme (15 minims), t. i. d., entirely controlled them. But there was absolutely no improvement in the muscular power of the legs, and that of the arms had so decreased that the dynamometer showed, r., 10–12; l., 0; still, the slight encouragement given by this plan of treatment was sufficient to induce its continuance, and good results speedily followed. On November 28th the patient was able to move both legs slightly, while the strength in the arms had become even greater than it was on admission; sensation had improved, and the pains had entirely ceased, so that morphia was no longer given. About the end of the fourth week (December 8th), sensation and motion had been so far restored that he stood up for the first time, but was unable to walk without assistance. *December 15th.*—Dynamometer showed, r., 74–65–67; l., 60–55–60; and, excepting slight numbness, which remained in the soles of both feet, he felt well. *December 29th.*—He was discharged cured.

On July 26, 1880, he was met in the street, and he stated that since his discharge from the hospital he had not had the slightest return of his illness.

STRANGULATED INGUINAL HERNIA; HERNIOTOMY; DEATH.

Reported by F. H. Markoe, M. D., House Surgeon.

(Service of Dr. GEORGE A. PETERS.)

Henry M., aged thirty-seven, a clerk, was admitted on the afternoon of August 8th, with symptoms of intestinal strangulation. He gave a history of having had a congenital hernia on the left side, which a few years ago became strangulated and was successfully operated upon. He was never aware that any hernia existed on the right side. Three days ago, while descending a flight of steps, he slipped on a piece of cork, and in attempting to recover himself gave his hip a severe wrench. He was immediately seized with distressing pain in the right inguinal region, which radiated down the corresponding side of the scrotum and upward into the abdomen, and was accompanied with nausea and a feeling of faintness. From former experience the patient concluded that he had ruptured himself, and on examination he found the right side of the scrotum filled with a soft mass, which he reduced with but little trouble. A few hours later, upon some slight exertion, the mass again came down; and, after vainly endeavoring to replace it, he called in a physician, who succeeded in reducing all except a small portion, of the size of a horse-chestnut. Pain and nausea persisted, and after a short time vomiting ensued. These symptoms continued for three days, gradually increasing in severity—the patient taking no nourishment whatever, and having no movement from the bowels, although enemata were given. Taxis was repeatedly tried without success, and at last his condition became so alarming that his physician advised his removal to a hospital.

When admitted, about seventy-two hours after the accident, his condition was deplorable—face anxious and haggard; extremities cold; pulse small and rapid; abdomen slightly tympanitic. Careful examination revealed a small, tense swelling occupying the right inguinal canal, entirely within the external abdominal ring, which was plainly made out to be pervious. This was excessively painful, and so tender that the slightest touch caused great agony and nausea. Taxis having failed, the patient was sent to a ward, morphia was given hypodermically, his hips were elevated, and cold was applied over the tumor, hot bottles to the extremities, etc. Soon after, he vomited several ounces of chocolate-colored fluid having a decided fæcal odor. *Three hours later.*—P. 92; T. 102·6° F.; general condition somewhat improved; surface warmer and pulse fuller. Ether was administered, and taxis was again attempted for a few minutes only, and, as reduction was not attainable by it, herniotomy was performed. It was found necessary to open the sac, which contained a knuckle of small intestine about two inches in length, of a deep mahogany-color, also a few drachms of odorless serum slightly tinged with blood. After the division of the constriction, which was in the neck of the sac, the hernial mass was readily returned into the abdominal cavity. The sac proved to be the tunica vaginalis testis, showing the hernia to have been of congenital origin. The wound was closed with sutures, and a fenestrated drainage-tube was laid along its tract and made to emerge through a counter-opening in the scrotal tissues at the bottom of the sac. Carbolic dressing was then applied. Throughout the operation and the dressing all of Lister's precautions, including the use of the spray, were faithfully observed. The patient, after rallying from the ether, became very restless, throwing himself from side to side, and making it almost impossible to keep him in bed; P. 139; R. 30; T. 105°. The abdominal pain became more severe, the tympanites increased, and rambling delirium was present. Stimulants and morphia in small doses were administered. *One half hour later.*—T. 106·6°. From this time the patient failed rapidly, the temperature steadily rising until death, which occurred about nine hours after the operation. The thermometer registered 109·3° a few minutes previous.

Autopsy, six hours later.—Brain, lungs, and stomach intensely congested. Liver very fatty; kidneys less so. On opening the abdominal cavity, the peritoneal surface of the small intestine was found to be congested. There were slight adhesions between the folds of the small intestine—evidently old, as they were well organized, containing many blood-vessels. No evidences of recent peritonitis. The internal abdominal ring on the right side was perfectly patent. About six inches from the cæcum, a knuckle of the ileum two and one half inches long, together with its mesentery, was found very much congested and thickened; at the upper end of this there was a marked constriction, apparently due to prolonged pressure, and at this point the caliber of the gut was one eighth of an inch less than above or below. The peritonæum in this situation was roughened and thickened, and on opening the gut the mucous membrane showed congestion and thickening; beyond this its condition was perfectly good. The small intestine was filled with dark-colored fluid having a very bad odor.

BOSTON DISPENSARY.

ORAL CHANCRE.

(SERVICE OF DR. J. FOSTER BUSH.)

A woman, nineteen years old, by occupation a seamstress, came to the dispensary for treatment for an ulcer on her lip. She stated that at first it seemed as if the skin was simply off the lip, the cause of which she attributed to smoking cigarettes, at which she was no novice. The "spot" growing larger and "lumps coming in her throat" caused her to seek medical aid. She was first seen on the eighth day of its existence. Upon the median line of the lower lip was a superficial excoriation as large as a split pea, elliptical in shape, excavated at its center, and covered in part with a thin yellowish scab. The base was visible in one place, and was covered by reddish-gray granulations, which threw out no appreciable exudation. There was no parchment-like induration, though the lip was thickened. A submaxillary gland on the right side was indurated and enlarged. (She stated that glandular enlargement was a common occurrence whenever she "took cold.") No history of specific exposure could be obtained. She was given some simple ointment and told to report in four days, at which time the gland on the right side was as large as a hen's egg, and the left one was of nearly the same size. Mercurial ointment was ordered to be applied to the lip. Six days later the glands were subsiding; the ulcer had a red base, with a reddish border and indurated margin. Ordered red iodide of mercury, gr. ⅛, three times a day.

Ten days more, and the induration of the glands had disappeared, and the ulceration had closed over, but at its seat a hard, pea-like mass could be felt. As "the salve made it feel better," it was continued, though the biniodide was discontinued, as it disagreed with her, and in its place citrate of iron and quinine was given in five-grain doses. Forty-one days after she was first seen by me, forty-nine after she first noticed the "sore," a roseola appeared on the arms and trunk. This was followed by pains along the tibiæ (no thickening discovered, however), by falling-out of the hair, and by condylomata, which phenomena did not leave her until the fifth month from the beginning of her chancre. Latterly she had been put on the use of iodide of potassium and red iodide of mercury, in small doses, and had no disturbance for two months, at the end of which time mucous patches made their appearance, but under the treatment above spoken of, with local application of "acid wash," soon subsided. It is now six months since any lesions save acne have shown themselves. She still continues with the above-mentioned treatment, and her general health is better than when she was first seen.

Upon repeated questioning, the only fact that could be elicited as to the inoculation was, that her "young man" had kissed her several times "with his tongue" at a time when he had a "sore mouth." This case of itself has no special interest save as to the mode of inoculation, and is simply reported to add one to the number in which the virus has been introduced without sexual intercourse.

◆

Proceedings of Societies.

NEW YORK CLINICAL SOCIETY.

A REGULAR meeting was held February 27, 1880, Dr. F. P. FOSTER chairman for the evening.

ANCHYLOSIS OF TEMPORO-MAXILLARY JOINT.—Dr. R. ABBE presented a patient, of whose case he had spoken at the December meeting. [Dr. Abbe's account of the case, with a description of the operation, is given in the April number of the "JOURNAL," p. 362.] There was some injury done to the nerve-fibers of the orbital orbicular muscle at the time of the operation, and there had been for a week or two some stiffness of the joint on the opposite side. The paralysis of the orbicularis muscle began to disappear in a short time, and was now shown only by failure to close the eye promptly. The mouth could be opened to the extent of one inch, with no pain or stiffness. The preceding atrophy of the masticatory muscles had been recovered from, and the boy, who had never appeared specially ill nourished, now weighed much more than before. The peculiar lower jaw, presenting the undershot teeth, was a family feature, and was not the result of prolonged anchylosis. Dr. Abbe further said that he knew of but one other case in which a like operation had been performed *over* the joint, while there were several instances in which similar deformity had been relieved by operation from below. He knew of cases of paralysis of the orbicular muscles of the mouth and eye, following the removal of the entire parotid, from which there had been complete recovery.——Dr. ABBE presented a second patient suffering from anchylosis of the jaw. The boy, now sixteen years of age, had, seven years ago, sustained at the same time fracture of the leg, of the clavicle, and of the jaw. The fracture of the latter bone took place at the angle on the left side, and satisfactory union followed. Two years ago the jaw began to stiffen, and its motion became impaired. At the present time the jaws were nearly closed, but voluntary effort increased the space between the teeth about one eighth of an inch. When the mouth was opened that distance, there was slight motion toward the right side, indicating disease at the joint upon that side. Over the head of the bone there was decided thickening. A diagnosis of rheumatic arthritis was made, and one month ago the administration of iodide of potassium (ten drops of the saturated solution, three times a day) was begun. No improvement had followed. If the disease of the joint should cease to be active, Dr. Abbe would, by way of treatment for the deformity, forcibly open the mouth, under anæsthesia, and maintain the result thus obtained by using, at stated intervals, some instrument for separating the jaws. By such a method Dr. Spencer Watson, of Boston, had established motion to the extent of an inch and a quarter in a similar case. Dr. Abbe showed an ordinary rectal speculum, which he had found to serve very well for separating the jaws, and also a Mott's dilator.

Dr. C. B. **Kelsey** read a paper upon "External Rectotomy as a Substitute for Lumbar Colotomy in the Treatment of Stricture of the Rectum." [See "The New York Medical Journal," March, 1880, p. 255.]

Embolism of the Arteries of the Upper Extremities.—Dr. G. L. **Peabody** related the case of a lady to whom he had been called, who, when first seen, was in apparent collapse—the pulse was 120, scarcely to be felt in the left wrist, and not at all in the right one. There was paralysis of the right side, but no aphasia. There was a history of slight illness for a few days previous, accompanied by pain, which latter had not been severe, and had been regarded as rheumatic. The right arm was œdematous. The use of ether and stimulants was soon followed by improvement. There had been old cardiac and renal disease, and there was œdema of the lower extremities, but no murmur was to be heard. The œdema which was seen in the fingers of the right hand, on the first visit, rapidly extended up the arm, and there was tenderness along the brachial artery. In three days the pulse was again perceptible, and the œdema of the arm began to disappear. As the right arm was improving, the left was similarly affected, going through the same stages. On the fifth day there was a pleuritic pain between the scapulæ, cough, and bloody expectoration. There was no chill, and but little fever at any time. The patient gradually sank, and died on the eleventh day. The diagnosis had been Bright's disease and mitral affection, primarily, followed by multiple emboli and hæmorrhagic infarctions of the lungs. The treatment had been stimulating and symptomatic. Dr. Peabody had made a post-mortem examination upon a patient at the New York Hospital, who, during life, had presented similar symptoms, the pulse having returned slightly before death. A plug, an inch in length, was found occupying the brachial artery.═══Dr. A. McL. **Hamilton** agreed with the diagnosis so far as concerned the immediate cause of death. Owing to the absence of cerebral symptoms, however, he thought that it was not a case of true embolism, but the result rather of defective heart-force, with that peculiar condition of the blood favoring the formation of coagula. In nineteen out of twenty cases, aphasia was present when true embolism occurred.═══Dr. J. H. **Emerson** mentioned pain as a prominent symptom in the extremity which was the seat of embolism in one case which had come under his notice.═══Dr. E. L. **Partridge** thought that severe pain was an early and marked symptom in the majority of cases of embolism of arteries of the extremities, and that it was due to anæmia of the nerves beyond the situation of the embolus.

Uræmia.—Dr. W. H. **Katzenbach** related a case of uræmic poisoning. He was called to see a man who was said to have a "bilious attack." The chief symptoms were vomiting, diarrhœa, and some abdominal pain. He was told that during the past two or three years the man had had many such attacks, each one usually lasting three or four days. His appearance was that of a person with advanced organic disease of the lungs. On the following day he seemed better, but four days later vomiting again began, and continued up to the time of his death. His mind was clear and his tongue clean. There was some cardiac hypertrophy. The urine was of low specific gravity, and loaded with albumen. On the eighth day his condition warranted an unfavorable prognosis, with the suggestion, in view of the existence of cardiac hypertrophy and marked diminution of urine, of the probability of uræmic convulsions. Muscular twitching began and persisted, and the man was unable to sleep. Later on, any slight jar of the bed would bring on tonic muscular spasm resembling tetanus. Muttering delirium was present. On the ninth day he died. The treatment had been by vapor-baths, hydragogue cathartics, hot poultices over the region of the kidneys, infusion of digitalis (at first with acetate of potassium, afterward with the bitartrate), and, toward the end, stimulants. A combination of morphine and atropine, used hypodermically, he believed postponed the uræmic convulsions. Dr. Katzenbach thought that the previous illnesses which the patient had called bilious attacks were uræmic in nature, and considered it unusual to see such attacks attended by pain. He did not use jaborandi, on account of the patient's weakness. ===== Dr. A. A. Smith believed jaborandi useful in certain cases, but very depressing when cardiac weakness was present. It was a dangerous remedy, and had produced death. He advocated the use of small doses frequently repeated. For the purpose of counteracting the depressing effect of jaborandi, he thought that better than digitalis was the combination of morphine and atropine ($\frac{1}{8}$ grain of the former with $\frac{1}{96}$ or $\frac{1}{120}$ grain of the latter).

Urethral Calculus.—Dr. L. B. Bangs related the case of a man, aged thirty-six, who stated that in his boyhood his prepuce covered the glans and could not be retracted. He had never had venereal disease, but had suffered from repeated attacks of balanitis. When fifteen years old, he had repeated attacks of "stoppage" of urine for hours, and finally was able to force out his urine with pain at the head of his penis. Ten years ago, a physician removed some of the redundant prepuce. During the past two months his pain and dysuria had been continuous and intense. For many years he had been compelled to rise at night to urinate at least twice, and the intervals during the day were short. For four years his urine had been thick, containing a copious sediment. For one month he had now been in bad health, complaining of pain in the right side and of this trouble with his urinary apparatus. Examination of the urine showed a specific gravity of 1·016. It contained 25 per cent. of albumen, and there was a deposit of pus, mucus, bladder-epithelium, and a few triple-phosphate crystals, but no blood. Physical examination of the genitals showed the glans entirely covered by the prepuce, which was everywhere adherent. The meatus, to the edge of which the stump of the prepuce adhered, was narrowed and stiffened by the contraction of the cicatrix of the former operation. A bulbous bougie, No. 8 (French), could be made to pass the meatus with difficulty. It then passed, with pain, along a narrowed and roughened urethra for two inches and a half, and then became free. The sensation was as if it were passing over gravel, particularly at a point an inch and a half from the meatus, where a hard, sensitive tumor, of about the size of a small bean, could be felt externally. The mass was slightly movable, gave a sensation of crepitus, and had been growing in size, slowly but steadily, for some months. The man was emaciated, anæmic, and weak. On August 13th, a small Civiale's meatotome, equal to No. 8, was introduced, and the urethra, for a distance of two inches and a half, was enlarged by cutting to an extent sufficient to admit the bulbous meatotome, with which the operation was continued until No. 30 could be entered. The tissues cut like cartilage, and the edge of the knife grated upon calcareous matter which was lodged in the urethra for fully two inches. With the first incision, pus gushed from the meatus. The lump described was found to contain a calculus, conical in shape, measuring two by three centimetres, which was scooped out of the urethra without great difficulty. The result had been complete relief to all his urinary symptoms, with very great general improvement. Dr. Bangs said such cases were not frequent, but sometimes small calculi were found in adults, situated behind strictures. He had seen a calculus so situated in a child in one instance.

A REGULAR meeting was held March 26, 1880, Dr. A. A. **SMITH** chairman for the evening.

Dr. E. T. **ELY** read a paper upon "The Effects of Tobacco," with special reference to its influence upon vision. [See "THE NEW YORK MEDICAL JOURNAL," April, 1880, p. 367.]

EXTERNAL RECTOTOMY.—Discussion of the paper read by Dr. C. B. **KELSEY** at the preceding meeting being in order, Dr. R. **ABBE** remarked that he thought the views expressed in the paper were pertinent to the subject, and appropriate to the tendency just now existing whereby many persons were advised to submit to lumbar colotomy. In any case of rectal disease, if the caliber of the rectum could be kept of the size of the finger, the patient could enjoy years of comfort. He mentioned a case now under his care in which he thought proctotomy would be serviceable. There existed a large and very hard mass lying against the sacrum. The pain suffered by the patient was due, however, to spasm of the sphincter rather than to the stricture.═══Dr. **KELSEY** regarded the finger as the best and safest rectal dilator. In one case, which he had quoted in his paper, a condition existed similar to that in Dr. Abbe's case. With much difficulty the operator bored his way through the mass with scissors. In such cases pain was not relieved by lumbar colotomy, though it was the pain caused by spasm of the sphincter muscle which in reality led to the performance of the operation. Pain, therefore, should not be regarded as an indication for the operation of lumbar colotomy, the correct indication being stricture which could not be relieved by other means. The passing of fæces over an ulcerated surface caused far less pain than the contraction of the sphincter. Dr. Kelsey thought that, after all operations for internal hæmorrhoids, cutting or stretching the muscle would obviate subsequent pain.═══Dr. A. A. **SMITH** believed that cutting or stretching the sphincter would of itself cure many cases of hæmorrhoids, certain of which had their origin from the inferior hæmorrhoidal veins, which passed through the muscle.

CONJUNCTIVITIS FROM CHLORAL.—Dr. J. H. **EMERSON** mentioned a case of ophthalmia produced by the use of chloral hydrate. The patient, a young man, was subject to attacks of asthma, and in two severe attacks chloral, in ten- or fifteen-grain doses, had afforded great relief. This led him, during a recent attack, to employ it each night for some time. Shortly after he began its use, the conjunctiva of the globe and lids became injected, and photophobia existed, with profuse lachrymation. The latter, as it occurred in the left eye, did not correspond with the degree of photophobia. The affection of the eyes required him to keep his bed. Iodide of potassium, which he had been taking, had been discontinued for some time, and the resulting acne and throat-irritation had disappeared. There seemed to be no cause therefore, other than the use of chloral, for the ophthalmic trouble. The treatment first adopted was the application of camphor-water and borax, then of sulphate of zinc and rose-water, but no improvement resulted. The chloral was then discontinued, and immediate improvement took place.═══Dr. **ELY** thought that the weight of evidence agreed with the view that chloral could produce the symptoms mentioned.

Oral Chancre.—Dr. E. L. Partridge mentioned the case of a girl of twenty-two. She had two male friends whom she had kissed, and she could now recall the fact of sore lips on the part of one of them. About February 9th there appeared a small, hard lump on the lower lip toward the right side. She described it as resembling a "corn," and said it was not at first ulcerated. It rapidly increased in size, and presented a superficial ulcerated surface. Three weeks after its appearance she noticed enlargement of the sublingual and right submaxillary glands. When first seen, at the New York Hospital, March 20th, the sensation imparted to the finger was as if a pea were situated in the substance of the lip. In addition to this well-defined induration, there was some inflammatory swelling adjacent. The sublingual and right submaxillary glands were enlarged and of stony hardness. At the present time, six weeks and a half after the appearance of the lesion, no secondary syphilitic manifestations were present. With the exception of one dose of five grains of calomel, no anti-syphilitic treatment had been employed. The lesion had improved somewhat. ===== Dr. Abbe showed a cast of the lip, which he had taken. ===== Dr. G. H. Fox thought that non-specific sores occurred on the lip, which might readily be mistaken for the initial lesion of syphilis. He had seen, in two instances, a hard tumor presenting the characteristics of hard chancre, which was never followed by syphilitic manifestations. For lack of a better name, he called the lesion a modified herpes.

Aconite Poisoning.—Dr. Smith related a case of aconite poisoning. For a patient who was under medical advice there had been prescribed a mixture which was to contain, to each dose, ten drops of tincture of cannabis indica and five drops of tincture of aconite. The first dose was given at five in the afternoon, and the second a few hours later. Soon after the second dose, symptoms of aconite poisoning came on. When the patient was seen by Dr. Smith, the pulse and respiration were irregular, the former being forty-four. The eyes were closed, and, though the intellect was clear, the patient talked incessantly. The hands (which were kept constantly open) and the feet were cold, and very moist. There was no vomiting; the extremities were numb. Brandy had been administered, but had not stimulated the heart. Inquiry developed the fact that, owing to a mistake on the part of the apothecary, ten drops of the aconite tincture had been administered at each dose. Before it was possible to begin treatment, improvement showed itself, and the case terminated favorably. In connection with the history, Dr. Smith raised two points regarding treatment: *First*, that he believed that free administration of a combination of morphine and atropine would have served admirably as a circulatory stimulant, and he would have employed it, if the patient had not shown such improvement before it could be obtained; *Secondly*, he inquired whether the use of the faradaic current would have been prudent or useful in the condition of the heart which was present. ===== Dr. Kelsey and Dr. Abbe would have hesitated before employing the faradaic current, and the latter suggested the intra-venous injection of ammonia. ===== Dr. F. P. Foster said that he certainly would not use the galvanic current, and he thought that authorities generally believed that the faradaic current threw the heart into disorderly action. ===== Dr. Fox believed that the effects which were often attributed to the use of electricity were in reality due, in many cases, to the trouble for which the treatment was adopted. ===== In answer to Dr. Emerson, Dr. Smith said he regarded the inhalation of oxygen as depressing to the heart. He had used the faradaic current in cardiac depression, but never applied directly over the heart, and had seen no harm follow. ===== Dr. D. B. Delavan gave the history of a severe case of aconite poisoning. A woman, of fifty-five, suffering from sore-throat, received, through error on the part of the apothecary, a poisonous dose of the tincture. Prominent among the symptoms was the occurrence of convulsions, with strabismus and opisthotonos. These fits, each lasting for a few minutes, continued for two hours. Respiratory and cardiac action were so feeble as scarcely to be appreciated. Brandy served a good purpose, and 120 half-drachms were given hypodermically. Sylvester's method of artificial respiraton was also of service. The faradaic current was employed, but, owing to the battery being out of order, it was too feeble to do good or harm. Whenever the respiratory action was especially weak, a smart, quick blow over the region of the heart served to improve it. Recovery resulted, the three efficient resources having been brandy, artificial respiration, and the blow on the precordial region.

A REGULAR meeting was held April 23, 1880, Dr. G. L. PEABODY chairman for the evening.

SYPHILITIC DISEASE OF THE TONGUE.—Dr. E. L. PARTRIDGE showed a man, thirty-two years of age, with a gummy deposit in the substance of the tongue. He had had a hard chancre twelve years previous, and had been under treatment during the past few years, on several occasions, for ulcerations of the throat and nasal passages. Four weeks ago he observed a swelling of the tongue, attended by excessive salivation. The tongue was found greatly enlarged in its right half, with a feeling of firmness not found in the normal tongue. There was scarcely any tenderness on pressure. Fifteen drops of a saturated solution of iodide of potassium were given three times a day, and the tumor had considerably diminished in size. There had never been pain of any consequence.

EFFECTS OF TOBACCO.—Discussion upon the paper read by Dr. E. T. ELY at the preceding meeting being in order, Dr. D. B. DELAVAN said that he had examined the throats of many workers in tobacco, and had almost always found pharyngitis. He had believed, at first, that it resulted from the direct irritating effect of tobacco, but had since come to believe that neglected hygiene, confinement in badly ventilated rooms, inhalation of dust, etc., had much to do with its production. He had found it very obstinate to treat. ═══ Dr. H. S. NORRIS mentioned the case of a gentleman who habitually smoked to excess, and suffered from attacks of vertigo. These attacks began with pain in the top of the head, over the junction of the frontal with the parietal bones, which grew rapidly worse and was followed by unconsciousness. The amount of tobacco used was much reduced, and the intervals between the attacks became much longer. The patient then passed from under observation. ═══ Dr. G. L. PEABODY said that the conclusions of Dr. Hammond, published some years ago in a popular journal, agreed with those in Dr. Ely's paper. ═══ Dr. L. B. BANGS thought that a distinction should be made between the preparers of the leaves and the manufacturers of the cigars, one class being much more exposed to the déleterious effects than the other. He had seen, during the past winter, two men who showed decided impairment of sexual function from the abuse of tobacco. Improvement took place under treatment, without their giving up their occupation. ═══ Dr. ELY thought that sexual disturbances attended the abuse of tobacco. ═══ Dr. J. H. EMERSON had seen among young girls, employed in tobacco-stripping, an unusual amount of neuralgia, affecting chiefly the intercostal and abdominal muscles. He thought it due, perhaps, as much to bad hygiene as to their occupation.

ORAL CHANCRE.—Dr. PARTRIDGE continued the history of the young girl with supposed chancre of the lip, mentioned at the preceding meeting. At that time, six weeks and a half had elapsed from the appearance of the lesion, and there had been no manifestations of constitutional syphilis. Four days afterward, a combined roseolous and papular eruption appeared, and one week later there was general febrile disturbance, with headache, osteocopic pains, etc.

HYSTERICAL VOMITING.—Dr. **PEABODY** related the case of a woman, twenty-two years of age, who was a nurse in the New York Hospital. There had been something in her domestic life which occasioned her anxiety and proved the exciting cause of the attack. She had been on night-duty for three weeks preceding the seizure, and had been unable to sleep during the day. Her vomiting began abruptly, and continued in spite of every available resource for its prevention. All the anti-emetics proved of no value in her case. Food was not retained. Her condition grew steadily worse, and rectal alimentation was kept up for two weeks, during which time no solid, and not more than a quart of liquid, food was given by the stomach. For five days no medicine or food was introduced into the stomach. She complained of a violent pain in the head, and was very much exhausted. The pulse reached 120 or 130, but the temperature never rose above 100° F. Though nothing was put into the stomach, still the vomiting continued at intervals of about three hours. The vomited material resembled beef-tea, and was considerable in quantity, having a slightly acid reaction. Dr. Draper saw the patient in consultation, and suggested the use of the constant current and blisters. No relief followed. When finally her condition seemed almost extreme, the vomiting suddenly ceased, and within a week she was well. At the time of recovery, she was taking nothing except quinine hypodermically. The urine was normal during the entire sickness, but when recovery took place a trace of albumen appeared, together with hyaline casts. Jolly, in "Ziemssen's Cyclopædia," reported cases almost identical.

PERITONITIS AFTER THE USE OF THE UTERINE CURETTE.—Dr. **C. B. KELSEY** mentioned a case of uterine hæmorrhage which had existed for two years. Examination showed a little polypoid growth hanging from the os uteri. The cervix was dilated with a sponge tent, and the cavity of the uterus was scraped with Sims's curette. No undue violence was employed. On the following day vomiting and tympanites were present, and almost immediately all the symptoms of general peritonitis were developed, and death occurred within a week.

PERICYSTITIS AFTER ASPIRATION OF THE BLADDER.—Dr. **W. T. BULL** spoke of a case of extensive pericystitis and abscess following aspiration of the bladder. The patient had an attack of retention of urine, and the surgeon, failing to reach the bladder by the urethra, employed the aspirator. Immediately after the second aspiration, cellulitis occurred, resulting in a large abscess situated between the bladder and the abdominal wall. Before its contents had been evacuated, a sharp attack of suppurative fever occurred. The cavity of the abscess was not obliterated for several weeks. This was the first case known to Dr. Bull in which such a complication had taken place. He had known of many cases in which aspiration was kept up for some time. In one instance aspiration was practiced twice a day for a month. He believed that one rule should be rigidly followed while the aspirator-needle was being withdrawn, viz., suction should be kept up, and thus the escape of urine into the track of the needle would be prevented.

NEW YORK SOCIETY OF GERMAN PHYSICIANS.

A STATED meeting was held April 23, 1880, Dr. L. BOPP in the chair.

OPTICO-CILIARY NEURECTOMY.—Dr. GRUENING described this operation, as performed by him in a case of sympathetic irido-cyclitis. Dr. Knapp's method was adopted, by which excision of a portion of the optic nerve was effected without injury to the muscles of the bulb, and the nerve severed as far as possible from the globe. By this procedure considerable segments of the optic and of the six or eight branches of the ciliary nerves were readily removed.═══Dr. KNAPP reported that he had performed this operation three times during the preceding week—the last time, for glioma. Should the cut surface of the optic show a colloid appearance, he advised that the nerve be grasped with a double hook, and by cautious traction brought into the field of vision, in order that the whole diseased portion might easily be removed. Schweigger's method gave ample room for manipulation, but appeared to be a harsh procedure—the rectus internus was severed, then the optic nerve, and lastly the insertions of the two oblique muscles, so as to guard against further invasion through the vasa vorticosa. On account of high muscular tension, eversion of the bulb was often difficult, and sometimes impossible without division of the muscles. In one of the cases cited, sympathetic ophthalmia was much improved, and the marginal adhesions of the iris were markedly reduced, but Dr. Knapp was not very sanguine of a good ultimate result.═══Dr. GRUENING remarked that, so long ago as 1874, Dr. Knapp performed optic neurectomy for endothelioma.

GANGRENE OF THE APPENDIX VERMIFORMIS, WITH CONSECUTIVE PERFORATION AND PERITONITIS.—Dr. WENDT showed a specimen from the body of a man who, while apparently in good health, upon lifting a heavy load, was suddenly seized with pain in the right iliac region. Four days later peritonitis came on, without rigors. The autopsy revealed the condition above mentioned, and the peritonæum was found extensively inflamed, having apparently done service as a partition in preventing the inflammation from invading the underlying cellular tissue. Whether muscular exertion was the cause of the trouble, or whether ulceration had previously existed, without showing symptoms, seemed to be a question.

PULMONARY TUBERCULOSIS, WITH SECONDARY INFECTION OF THE COLON.—Dr. WENDT related a typical case of tuberculosis of the lungs, in which numerous tubercular ulcers were found in the colon, while the small intestine had escaped infection. He remarked that, according to Cohnheim's investigations, neither the tubercle, the cheesy disintegration, nor the giant cell was a trustworthy criterion of tuberculosis. Cohnheim insisted upon the specific infectiousness as the only characteristic, and claimed that the intestinal tract (and notably the small intestine) was infected by sputa that had found their way into the alimentary canal. Dr. Wendt believed that in his case some other explanation must be looked for.═══Dr. JACOBI suggested that the rapid peristaltic action of the small intestine might occasionally prevent its infection.

ACUTE LOBAR PNEUMONIA.—Dr. WENDT gave the history of a case of croupous pneumonia that ended fatally on the third day. At the autopsy, the thoracic and abdominal organs were in a condition met with in acute infective disease. The skin was of a deep yellow tinge; the first stage of intense icteric hepatitis was present; the pericardium contained about a hundred grammes of bloody serum. The walls of the right auricle were thinned and flabby. Yellow, coagulated masses were found intimately adherent to the endocardium, and could be traced through the superior vena cava into the jugular vein. More or less of this peculiar material was found in all the cavities of the heart. The kidneys were normal; the spleen was small and hyperæmic; the middle lobe of the right lung showed the usual appearance of croupous pneumonia.

ATAXIA WITHOUT MOTOR PARALYSIS.—Dr. JACOBY presented a young man (a patient of Dr. Rudisch) with this rare form of ataxia. The patient had previously had diphtheria. The sensibility was everywhere normal. There was no patellar tendon-reflex. Much improvement had taken place under treatment.

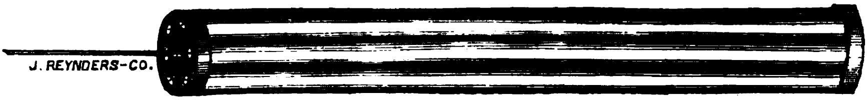
PROGRESSIVE HYPERTROPHY AND STENOSIS OF THE STOMACH.—Dr. A. JACOBI presented a specimen showing this condition. The patient, who was of a gluttonous disposition, suffered during the six months preceding his death with frequent attacks of vomiting, and became very much reduced. All food was rejected from the stomach within ten or fifteen minutes after it was taken. Up to within a short time before death the stools were of quite normal appearance. The diagnosis lay between cancer of the stomach and dilatation of that organ, due to catarrh, with the possibility of adhesions from localized peritonitis. The autopsy revealed a condition rarely mentioned in the books—the dimensions of the organ were hardly those of a large intestine, and there was concentric hypertrophy of the walls, indicating previous subacute ulcerative gastritis. In general the walls were enormously thickened, but in some places they were so thin as to be transparent. There was a cicatricial appearance in the neighborhood of the cardia, and here a large sarcomatous lymphatic gland was found. Similar conditions had been observed in stenosis of the œsophagus, with rarely a decided guiding symptom.=====Dr. LANGMANN thought the case was one of phlegmonous gastritis.=====Dr. WENDT remarked that in the latter condition the tissues were loaded with the products of purulent inflammation, which would ooze out on pressure.=====Dr. LANGMANN replied that the specimen represented a secondary stage, in which the products of acute inflammation had been absorbed.=====Dr. JACOBI was inclined to dissent from Dr. Langmann's view, as the patient had at no time been sick enough to keep his bed.

REMOVAL OF THE RIGHT HALF OF THE LARYNX, THE PHARYNX, AND THE BASE OF THE TONGUE.*—The operation was performed by Dr. GERSTER, March 5, 1880, at the German Hospital. The patient, a man about fifty years old, was first examined in November, 1879, by Dr. Gruening, who detected a superficial ulcer to the right of the laryngeal entrance, which did not yield to anti-syphilitic treatment. Preliminary tracheotomy having been performed, the operation was carried out as follows: After securing the right lingual artery with a ligature, the larynx was exposed by an incision in the median line, and the right half of the thyroid cartilage (with the false and true vocal cords of that side), the entire epiglottis, the walls of the right side of the pharynx, the right half of the hyoid bone, and the whole base of the tongue were removed. Considerable embarrassment was experienced from the failure of Trendelenburg's tampon-cannula to prevent the trickling of blood into the trachea, and this had to be overcome by stuffing small pieces of sponge into the lower portion of the larynx. An œsophageal tube was now introduced, and the wound was cleansed with a ten-per-cent. solution of chloride of zinc, and plugged with gauze. No fever or inflammation followed; food was taken without difficulty; and, twenty-six days after the operation, the patient was able to walk about, and had gained six pounds and a half in weight. At present, when the cannula was closed he could talk in a dull but distinct voice. In swallowing, small particles of food would find their way into the trachea. This might be accounted for by the extensive removal of the tissues of the pharynx, or it might be due to the fact that the remaining left half of the larynx prevented the tongue from sufficiently overlapping the entrance to the trachea. Dr. Gerster hoped that this functional deficiency would be overcome by cicatricial contraction. Microscopical examination showed the tumor to be an adeno-fibro-sarcoma, probably identical with the neoplasm described by Maas as adeno-fibro-carcinoma.*

---

* For a full account of the case, see "Archives of Laryngology," June, 1880.

Instrument for the Removal of Particles of Iron or Steel from the Vitreous.—Dr. Gruening showed a magnet that he had devised for this purpose. It consisted of a series of bar magnets united at one end by an armature of malleable iron, on which was mounted a needle of soft iron 32 mm. in length, 1 mm. in width, and 0·3 mm. in thickness. This magnet would easily sustain a weight of 15 grammes [about 225 grains], and would promptly extract splinters and particles of iron weighing from 1 to 50 centigrammes [from ·15 to 7·5 grains] from the vitreous. Should it be inexpedient to extract the foreign body through the wound already existing in the sclerotic, Dr. Gruening would draw the splinter to a favorable site, and extract through an incision in the sclera. A splinter brought to the original wound might present transversely, and so render its extraction difficult. With some dexterity in manipulation, one end of the splinter could be attached to the magnetic needle, and the foreign body could then be removed with facility.



A stated meeting was held May 28, 1880, Dr. W. Balser in the chair.

Atresia of the Right Meatus Auditorius Externus.—Dr. Scharlau presented an infant with complete atresia of the meatus and deformity of the external ear.——Dr. Knapp remarked that congenital deformity of both ears was of rare occurrence, and that in most cases a trace of the rudimentary branchiæ of embryonic life might readily be detected. In the case presented two shallow fistulæ were noticeable. As a rule, the internal auditory apparatus was equally defective, and no benefit was to be expected from surgical interference.

Perforating Ulcer of the Duodenum.—Dr. Caillé presented a specimen and gave the history of the case. The patient, a confirmed dyspeptic for years, was in the habit of taking large quantities of dilute muriatic acid. A week before his death he drank two glasses of very cold beer, which brought on an attack of gastro-enteritis. Excessive diarrhœa and vomiting persisted for about twenty-four hours, after which the patient felt much relieved. Two days later he suddenly collapsed, and died shortly after of peritonitis. The autopsy revealed a solitary perforating ulcer, situated in the superior horizontal portion of the duodenum. In looking up the literature on this subject Dr. Caillé had come to the conclusion that such cases were comparatively rare, or at least not often recognized. The so-called embolic hæmorrhagic infarction was presumably the primary lesion, which underwent subsequent solution by the gastric fluid, which had an acid reaction throughout the stomach and duodenum. The duodenal ulcer had been observed in connection with severe burns, erysipelas, and chronic alcoholism. In the case cited no blood was found in the stools or vomited matter at any time.═══Dr. **Langmann** remembered a similar case, in which intestinal hæmorrhage was one of the guiding symptoms.

---

* "Archiv f. klin. Chirurg.," xix, p. 507.

Congenital Syphilitic Disease of the Liver.—Dr. **Jacobi** presented a liver, weighing but 1¼ oz., taken from the body of a new-born child of 10 lbs. weight. The parenchyma of the liver had been replaced by dense connective tissue, the result of interstitial hepatitis, probably due to intra-uterine syphilis.

New Microtome.—Dr. **Hailes**, of Albany, present by invitation, demonstrated and explained the mechanism of a new microtome devised by himself. The object was imbedded in a freezing mixture, and, by means of a screw and ratchet, sections could be cut with facility and rapidity, and of uniform and extreme thinness. Dr. Hailes also presented a series of forty micro-photographs taken from sections prepared with his microtome, illustrating the first five days' incubation of the chick.

◆

Reports on the Progress of Medicine.

QUARTERLY REPORT ON GENERAL MEDICINE.

No. III.

By W. H. KATZENBACH, M. D.,
ATTENDING PHYSICIAN FOR DISEASES OF THE CHEST TO THE OUT-DOOR DEPARTMENT OF BELLEVUE HOSPITAL.

1. **Walton**, G. L., and **Witherle**, C. B.—The ætiology of fever. "Boston Med. and Surg. Jour.," June 10, 1880.
2. **Baxter**, E. B., and **Willcocks**, F.—A contribution to clinical hæmometry. "Lancet," March 6, 1880.
3. **Teale**, J. W.—Abnormally high temperatures. "Brit. Med. Jour.," Jan. 24, 1880.
4. **Philipson**, G. H.—Notes of a case of hyperpyrexia. "Lancet," April 24, 1880.
5. **Cayley**, W.—On some points in the pathology and treatment of typhoid fever. "Med. Times and Gaz.," April 3, 10, 24, May 8, 15, 1880.
6. **Parvin**, T.—Typhoid fever in the Indiana Reformatory. "Am. Pract.," June, 1880.
7. **Jarnagin**, W. C.—Typho-malarial fever. "St. Louis Cour. of Med.," April, 1880.
8. **Claiborne**, J. H.—Typho-malarial fever. Remarks based on an endemic fever, of 1879, in the city of Petersburg and vicinage. "Virg. Med. Monthly," May, 1880.
9. **Kühn**, G.—Ueber Typhus recurrens. "Deutsche med. Wochenschr.," June 5, 1880.
10. **Woodward**, J. J.—Pathological histology of yellow fever. "National Board of Health Bulletin," Supplement, No. IV.

11. Hargis, R. B. S.—The ship origin of yellow fever, with comments on the preliminary report of the Havana Yellow-Fever Commission. "Gaillard's Med. Jour.," June, 1880.
12. Duckworth, D.—A plea for the neurotic theory of gout. "Brain," April, 1880.
13. Hadden, A.—Treatment of subacute and chronic gout. "Med. Record," April 17, 1880.
14. Budd, G.—Amyloid degeneration. "Lancet," Feb. 28, March 27, 1880.
15. Eade, P.—Scurvy in civil practice. "Lancet," June 26, 1880.
16. Holsteinborg, N.—Om Behandlingen af Difteritis i Svælget. "Hospitals-Tidende," March 3, 1880.
17. Meyer, J.—Om Behandlingen af Difteritis i Svælget. "Hospitals-Tidende," March 17, 1880.
18. Octerlony, J. A.—Acute rheumatism. [Clinical lecture.] "Med. Herald," June, 1880.
19. Greenhow, E. H.—Rheumatic fever treated with salicin.—Cases of rheumatic fever treated with salicylate of soda. [Proc. Clin. Soc. Lond.] "Brit. Med. Jour.," May 29, 1880.
20. ———.—The salicylates in acute rheumatism. [Editorial.] "Med. Times and Gaz.," May 29, 1880.
21. Petersen, J. C.—Kasuistiske Bemærkninger om Cerebral-rheumatismen og det Salicylsure Natron. "Ugeskrift for Læger," Jan. 31, 1880.
22. O'Connell, P.—Cerebral rheumatism. "Chicago Med. Jour. and Exam.," July, 1880.
23. Jackson, J. H.—Case illustrating the value of the ophthalmoscope in the investigation and treatment of diseases of the brain. "Lancet," June 12, 1880.
24. Osuna, D. P. A.—Diagnostico diferencial entre la fiebre cerebral y la encefalitis. "Andalucía Méd.," May 30, 1880.
25. Emerson, J. B.—Peri-encephalitis. "Jour. of Nervous and Mental Disease," April, 1880.
26. Jackson, J. H.—On aphasia with left hemiplegia. "Lancet," April 24, 1880.
27. De Watteville, A.—On facial paralysis from cold, with special reference to its prognosis. "Practitioner," May, 1880.
28. Hammond, W. A.—A case of progressive facial atrophy, with remarks on the pathology of the disease. "Jour. of Nervous and Mental Disease," April, 1880.
29. Mackenzie, S.—The diagnosis of tumors of the cerebellum. "Lancet," April 3, 10, 17, 1880.
30. Buzzard, T.—On some varieties of cervical paraplegia. "Brain," April, 1880.
31. McMunn, C. A.—Notes on a case of spinal apoplexy, with remarks. "Dublin Jour. of Med. Sci.," May, 1880.
32. Friedenreich, A.—Om spastisk Spinalparalyse. "Hospitals-Tidende," March 10, 18, 24, 1880.
33. Straus, I.—Note sur un cas de paralysie spontanée du plexus brachial (avec intégrité du nerf médian) et sur quelques localisations rares de paralysie du plexus brachial. "Gaz. Hebdom.," April 16, 1880.
34. Shaw, J. C.—Subacute myelitis of the anterior horns, with limited sclerosis of the lateral and posterior columns. "Jour. of Nervous and Mental Disease," April, 1880.
35. Gray, L. C.—A case of paralysis of the four extremities and the muscles of the trunk, due to myelitis of the anterior cornua of the spinal cord. "Proc. of Med. Soc. of County of Kings," May, 1880.

36. Jewell, J. S.—The nature and management of sleeplessness. "Jour. of Nervous and Mental Disease," April, 1880.
37. Weber, L.—Zwei Fälle von isolirter Lähmung des M. serratus ant. "Deutsche med. Woch.," May 22, 1880.
38. Josef, L.—Ein Fall von Lyssa. "Med.-chir. Centralbl.," April 30, 1880.
39. Lütkemüller.—Die histologischen Veränderungen am Zentralnervensysteme bei Lyssa des Menschen. [K. k. Gesellsch. d. Aerzte, Wien.] "Wien. med. Wochenschr.," June 5, 1880.
40. Kowalewsky, P.—Zur Frage über die Ansteckungsfähigkeit des hydrophobischen Speichels. "Memorabilien," March 31, 1880.
41. Csokor.—Ueber die pathologisch-histologischen Veränderungen in Zentralnervensystem wüthender Hunde. [K. k. Gesellsch. d. Aerzte.] "Wien. med. Woch.," May 29, 1880.
42. Gélineau.—De l'épilepsie chez les animaux domestiques, et de la transmissibilité présumée de leur mal à l'homme. "Tribune Méd.," June 13, 27, 1880.
43. Bouzol.—Note sur deux cas de chorée traités par l'aimant. "Lyon Méd.," April 4, 1880.
44. Leube, W. O.—Beiträge zur Pathogenese und Symptomatologie der Chorea und zur Beurtheilung des Verhältnisses derselben zur Athetose. "Deutsches Archiv. f. klin. Med.," xxv, 2, 3, 1880.
45. Beach, F.—An account of the microscopical appearances in a case of athetosis. "Brit. Med. Jour.," June 26, 1880.
46. San Martin, J.—Paralisis agitante consecutiva à una herida del nervio radial en el brazo izquierdo. "Cronica Med.-Quirurg. de la Habana," May, 1880.
47. Franck, F.—Sur les signes et la pathogénie des cardiopathies d'origine gastro-hépatique. "Gaz. Hebdom.," May 28, June 4, 1880.
48. Dumolard.—Note sur la sciatique intermittente. "Lyon Méd.," May 30, 1880.
49. Goodhart, J. F.—On anæmia as a cause of heart disease. "Lancet," March 27, 1880.
50. Brigidi e Banti.—Anemia perniciosa progressiva. "Lo Sperimentale," April, 1880.
51. Fenoglio, I.—Dell' influenza delle mallattie e di alcuni mezzi terapeutici sulla ricchezza emoglobinica del sangue. "Lo Sperimentale," May, 1880.
52. De Giovanni.—Sopra alcuni fatti clinici concernenti la patologia del ventricolo e del cuore. "Giorn. Internaz. delle Sci. Med.," fasc. 2, 3, 1880.
53. Hayem, G.—Sur les caractères anatomiques du sang dans les phlegmasies. "Gaz. Méd. de Paris," April 24, 1880.
54. Waller, A.—A pre-diastolic murmur. "Practitioner," May, 1880.
55. Taylor, F.—An unusual case of cardio-pulmonary murmur. [Clin. Soc. of London.] "Brit. Med. Jour.," June 26, 1880.
56. Allbutt, T. C.—On aortic regurgitation and the coronary circulation. "Brit. Med. Jour.," June 5, 1880.
57. Gibson, G. A.—Jugular reflux and tricuspid regurgitation. "Edinburgh Med. Jour.," May, 1880.
58. Bristowe, J. S.—Remarks on ulcerative endocarditis, or multiple embolism. "Brit. Med. Jour.," May 29, 1880.
59. Kennedy, H.—Observations on a case of fatty heart, with the state of the organ found, and also that of the par vagum. "Dub. Jour. Med. Sci.," April, 1880.
60. Wardell, J. R.—Aneurism of the left ventricle. "Brit. Med. Jour.," April 24, 1880.

61. Hayden, T.—Certain varieties of cardiac neurosis. "Brit. Med. Jour.," June 5, 1880.
62. Cantilena.—Angina pectoris. "Lo Sperimentale," April, 1880.
63. Thomas, J. P.—Carbonate of ammonia in diseases of the respiratory system, and as a special prophylactic and probable remedy in heart-clot. "Virginia Med. Month.," April, 1880.
64. Eger.—Beitrag zur Pathologie des Morbus Basedowi. "Deutsche med. Woch.," March 27, 1880.
65. Thomas, W. R.—On apoplexy of the lung from cardiac disease. "Brit. Med. Jour.," June 5, 1880.
66. Da Costa, J. M.—Some points in the pathology of tubercle. "Phila. Med. Times," June 19, 1880.
67. Gignoux, L.—De la tuberculose considérée comme une affection contagieuse. "Lyon Méd.," May 30, 1880.
68. Creighton, C.—An infective variety of tuberculosis in man, identical with bovine tuberculosis (Perlsucht). "Lancet," June 19, 1880.
69. Heitler.—Die Spontanheilung der Lungenschwindsucht. [K. k. Gesellsch. d Aerzte, Wien.] "Wien. med. Woch.," June 5, 1880.
70. Thorowgood, J. C.—On atmospheric and climatic influence on the causation and cure of pulmonary diseases. "Practitioner," March, 1880.
71. Anderson, M'C.—On the climatic treatment of consumption, with special reference to a visit to Davos Platz. "Glasgow Med. Jour.," April, 1880.
72. Maberly, W. H.—New Zealand as a resort for consumptives and other invalids. "Practitioner," May, 1880.
73. Bartholow, R.—Clinical lecture on the treatment of the various forms of consumption. "Med. News and Abs.," May, 1880.
74. Müller, D.—Zur Therapie der Tuberculose. "Deutsche med. Woch.," May 8, 1880.
75. Rohden.—Beiträge zur rationellen Phthiseotherapie. "Deutsche med. Woch.," March 2, April 10, 1880.
76. Powell, R. D., and Lyell, R. W.—On a case of basic cavity of the lung treated by paracentesis. [Royal Med. and Chir. Soc., London.] "Brit. Med. Jour.," June 19, 1880.
77. Thompson, R.—Tapping pulmonary cavities. "Virg. Med. Monthly," June, 1880.
78. Jones, H.—Two cases of phthisis in which hyperventilation was employed. "Brit. Med. Jour.," May 15, 1880.
79. Stadler.—Beitrag zur Therapie der Nachtschweisse Lungensüchtiger. "Med.-chir. Central-Blatt.," Jan. 23, 30, Feb. 6, 1880.
80. Lasègue.—Accidents cérébraux chez les phthisiques. "Arch. Gén. de Méd.," April, 1880.
81. Hunt, J. W.—The diagnosis and treatment of pleural effusions. "Dublin Jour. Med. Sci.," May, 1880.
82. Drummond, D.—Cases illustrating the advantages attending the use of the hypodermic syringe in medical diagnosis. "Dub. Jour. Med. Sci.," Jan., 1880.
83. Cordell.—Is there an erysipelatous pneumonia? [Baltimore Med. Ass.] "Maryland Med. Jour.," June 1, 1880.
84. Brown, B.—The nature and action of the causes of dyspnœa in pneumonia other than hepatization, and their specific treatment. "Virg. Med. Monthly," June, 1880.
85. Worrell, T. F.—Blood-letting in the treatment of pneumonia. "Chicago Med. Jour. and Exam.," April, 1880.
86. De Giovanni.—Intorno alle indicazioni del salasso nella pneumonite. "Gazz. Med. Ital. Prov. Venete," June 19, 1880.

87. Stephanides, E.—Einiges zur Aetiologie und Therapie der Gallensteine and Gallensteinkolik. "Wien. med. Wochenschr.," June 12, 1880.
88. Vedel, L.—De la difficulté du diagnostic des abcès du foie, siégeant à la partie convexe du lobe droit. "Tribune Méd.," May 22, 1880.
89. Powell, R. C.—Causes, symptoms, and treatment of hepatic abscess, especially those due to brain lesion. "Virg. Med. Monthly," May, 1880.
90. Richard.—Épanchement de bile dans la cavité péritonéale sans symptôme de péritonite. "Gaz. Hebdom.," April 30, 1880.
91. Teissier père.—Le traitement des kystes hydatiques du foie. [Soc. Nat. de Méd. de Lyon.] "Lyon Méd.," May 30, 1880.
92. Féréol.—De la rupture intra-péritonéale des kystes hydatiques, et du traitement qu'elle comporte dans certains cas. [Acad. de Méd., Paris.] "Progr. Méd.," May 29, 1880.
93. Concetti.—Echinococchi della milza. "Giorn. Internaz. delle Sci. Med.," fasc. 3, 1880.
94. Smith, W. R.—Constipation and its treatment. "Lancet," May 22, 1880.
95. Trastour, E.—De la dilatation passive de l'S iliaque et de ses conséquences au point de vue clinique. "Rev. Mens. de Méd. et de Chir.," April 10, 1880.
96. Bigelow, H. R.—The summer diarrhœa of adults. "Med. and Surg. Reporter," May 1, 1880.
97. M'Gown, J.—Intestinal obstruction, existing for nine months, cured by colo-puncture. "Glasgow Med. Jour.," June, 1880.
98. Lambart, W. H.—Case of intestinal obstruction or occlusion, lasting thirty-nine days; treatment by subcutaneous injections of morphia; recovery. "Lancet," June 26, 1880.
99. Coats, J.—On twisting of the intestine as a cause of obstruction. "Glasgow Med. Jour.," June, 1880.
100. Peabody, G. L.—On persistent priapism not connected with lesion of the central nervous system. "N. Y. Med. Jour.," May, 1880.
101. Leyden.—Ueber Nierenschrumpfung und Nierensclerose. "Deutsche med. Woch.," May 22, 1880.
102. Saundby, R.—Case of continued hæmoglobinuria, apparently hereditary. "Med. Times and Gaz.," May 1, 1880.
103. Clément, E.—Observation d'hémoglobinurie intermittente. "Lyon Méd.," May 16, 1880.
104. Da Costa, J. M., and Longstreth, M.—Researches on the state of the ganglionic centers in Bright's disease. "Am. Jour. Med. Sci.," July, 1880.
105. Saundby, R.—The histology of granular kidney. "Med. Times and Gaz.," April 10, 1880.
106. Ellis, C.—The significance of albuminuria as a symptom. "Boston Med. and Surg. Jour.," April 15, 22, 29, 1880.
107. Lépine, R.—Sur quelques points de la pathogénie de l'albuminurie. "Revue Mens. de Méd. et de Chir.," March, April, 1880.
108. Grigg, W. C.—Metaphosphoric acid a delicate test for albumen in urine. "Brit. Med. Jour.," May 29, 1880.
109. Saundby, R.—An inquiry into certain points connected with albuminuria. "Brit. Med. Jour.," June 5, 1880.
110. Koch, P.—Paralysie respiratoire aiguë du larynx. "Ann. des Mal. de l'Oreille, du Larynx, etc.," May, 1880.
111. Gerhardt, C.—Functional spasm of the larynx. "Arch. of Laryngol.," June, 1880.

1. The following seems to the writers the most probable view of the

origin of fever: "Through irritation of the vaso-motor center a tetanus of the smaller superficial arteries occurs, which, by diminishing the circulation in the skin, shuts in heat. The onset is accompanied by a chill or not, accordingly as the tetanus occurs suddenly or gradually. In some unknown way an increased production of heat is caused by the shutting in of heat. This increased heat production must be regarded as of much more importance than it was considered to be by Traube. Throughout the period of rising temperature there is decreased activity of heat elimination relatively to the new and increased rate of heat production. The elimination of heat may or may not be absolutely decreased. Even with tetanus of the arteries and rising temperature, the excessive heat production may be enough to make the absolute amount of heat eliminated greater than normal; but, during the rise, incompetency of the heat-eliminating system, dependent upon tetanus of the superficial arterioles, remains a cause of the rise and of the increased heat production. Exhaustion of the tetanus is followed by a more or less gradual increase of heat elimination and fall of temperature, to be followed in turn, if the fever continues, by a second tetanus and rise of temperature. In favor of this modified form of Traube's theory it may be said: (1) That the fact of greatly diminished circulation in the skin has been shown by Hüter in the septic fever of frogs. (2) That this theory only assumes a derangement of a well-known physiological function, namely, that of the vaso-motor center, while no center for heat production has been demonstrated. (3) That it has been shown in Experiment III that a fever can be produced by a primary shutting-in of heat, while it has not been shown that increased heat production can of itself cause fever. (4) That this theory retains all the advantages of Traube's original one in explaining the clinical and pathological phenomena of fever. (5) That it is free from the objectionable assumption of Traube that there is in fever patients a tetanus of the arteries, lasting for days and weeks. (6) That it is not inconsistent, as Traube's theory is, with the result of Leyden's calorimetric experiments on fever patients. (7) That shutting in of heat will, as has been shown in Experiment III, account for the great increase in the elimination of urea which is observed in fever."

4. The patient with *hyperpyrexia* was an unmarried domestic servant, aged twenty-three, who three years previously suffered from an attack of rheumatic fever. She was admitted to hospital July 4, 1879. She was in the habit of taking narcotics and spirits in large quantities for the purpose of relieving the severe pain from which she suffered, at one time taking five drachms of Browne's chlorodyne The case was regarded as one of hysteria, associated with amenorrhœa and intercostal neuralgia. A suitable diet was ordered, and the compound iron-and-aloes mixture was prescribed three times a day. *July 7th.*—Evening temperature, 101° F. *July 9th.*—Evening temperature, 112°, and the following morning, 112°. *July 11th.*—Evening temperature, 101°. *July 18th.*—Morning, 100°; evening, 112°. Three days after her admission, on account of the very high temperature and increased severity of the pain, the iron-and-aloes mixture was dropped, and twenty grains of salicylate of sodium were given every four hours. This not relieving the pain, morphia was administered in quarter-grain doses, and gave ease, but after the first dose the effect was less marked. *July 24th.*—Temperature in left axilla 117°, the highest recorded. On this day, in the right axilla it was 110°, and in the mouth 102°. On July 28th temperature in the left axilla was again 117°, in right axilla, 114°, and in the mouth, 112°. On July 26th the salicylate of sodium was omitted, and ten grains of sulphate of quinine, with dilute sulphuric acid, were prescribed three times a day. The perspiration was intensely sour, the hands were unsteady, and the skin began to peel off the fingers.

The patient was discharged from the hospital a few days later, on account of her troublesome manners and the discomfort she caused the other patients in the ward. On the evening preceding her departure the temperature was 98°, while five days before it had been 117°. About the middle of September, 1879, she visited a friend at the infirmary, and from the nurse's account she appeared to be in good health and looked well.

13. Dr. Hadden does not regard flesh food as a cause of *gout*, and gives the histories of four cases of this disease, which he treated by putting the patients on meat and non-amylaceous and non-saccharine diet, only such medicinal agents being employed as were from time to time indicated by temporary conditions. Favorable results were obtained in all the cases, the deposits in the joints diminishing, and the urates disappearing from the urine.

49. In this paper on *anæmia as a cause of heart disease*, four cases are related of hæmorrhage and resulting anæmia, in all of which at post-mortem examination well-marked *tabby striation* of the muscular fibers of the heart was found. Upon these cases Dr. Goodhart remarks that it is no new idea that anæmia leads to malnutrition of the heart. Idiopathic anæmia is constantly, and is well known to be, associated with a similar change (fatty degeneration of the muscular tissue of the heart). Fatty heart, ensuing upon recurrent hæmorrhage, shows that the simple bloodlessness can and does produce a state of heart precisely similar to that found in idiopathic anæmia, and the two series of cases thus tend to corroborate and explain each other. In chlorosis, and in all forms of anæmia in women, the heart's impulse becomes diffused and displaced outward; the first sound is sudden and excited, and associated with these are the subjective symptoms of breathlessness and palpitation. The best, or at any rate the safest, explanation of these phenomena appears to be that derived from post-mortem evidence, which demonstrates that anæmia is associated with degeneration of the heart muscle, and which therefore points directly to dilatation of the left ventricle as the cause of the symptoms. The heart in such cases is, from all we know of the morbid anatomy of anæmia, actually in a state of fatty degeneration; it has become dilated, and hence the symptoms complained of. Temporary dilatation leads to some incompetence of the mitral valve so long as it persists, and to this is due the systolic bruit that is so frequently present. Prolonged anæmia leads to fatty degeneration of the heart at all ages, and during the existence of such anæmia it is therefore imperatively necessary that the heart be rested as much as possible, and the anæmia should be dispelled with all possible celerity. Anæmia leads to fatty change of the heart. Fatty changes favor dilatation of the left ventricle. Dilatation of the left ventricle disarranges the coaptation of the mitral flaps, and mitral regurgitation results—the so-called curable regurgitation. But if this regurgitation is prolonged for any length of time, or is frequently repeated, there must be a considerable increase of friction, or wear and tear to the valves, and chronic disease of the tissue of the valves is started, which by and by leads to permanent thickening and disease of the valves. In these cases we find no stenosis; but contraction takes time, and this class of cases is in the main composed of senile muscular failures and degenerations, which are rapid in their course. The chronic thickening of valves found in renal disease is dependent in part upon the dilatation of the ventricle and regurgitation of blood through the valve, and so it is available as evidence of a similar change being brought about in a like manner in the fatty heart of anæmia. As another link of evidence, it is well known that mitral stenosis occurs in overwhelming proportion in women. Dyce Duckworth has collected two hundred and sixty-four cases of mitral stenosis from his own practice and that of Hayden and Hilton Fagge, and he finds that sixty per cent. were of rheumatic origin. We then have remaining forty per cent. of mitral stenoses, the majority of them in women, wanting an explanation of their origin. Scarlatina and diphtheria can account for but a very small proportion of cases. Mitral stenosis is not uncommon in advanced renal disease, and lesser degrees of mitral thickening are more common. Both pathological and clinical evidence has been adduced to show that anæmia is associated with deteriorated cardiac muscle and dilatation. Anæmia is an extremely common affection in women and children, but it is by no means very common in men. Is it improbable, then, that much of the mitral disease met with in women is the outcome of the mitral regurgitation which is seen so commonly in children and young adult women, and that this is dependent upon the dilatation of the heart in the course of the anæmia? In regard to treatment, the author recommends rest, the administration of heart-tonics, such as belladonna and digitalis, and of sedatives, such as bromide of potassium and hydrobromic acid. Iron should be given in larger than the customary doses, and in a palatable form.

57. The author of this paper on *jugular reflux and tricuspid regurgitation* has tabulated a large number of cases of jugular reflux, and arranged them ætiologically in thirteen classes, according to the cause of cardiac dilatation and venous reflux. After giving the sex and age of each patient, the position of the apex-beat measured from midsternum is stated. Auscultatory evidence is given under the heading of the respective areas, and when nothing is noted the sounds were normal. The relative frequency of causation, as arranged in the tables, is: (1) Mitral disease, 25 cases; (2) Bronchitis, 19 cases; (3) Mitral disease with bronchitis, 8 cases; (4 and 5) Spanæmia and phthisis, 6 cases respectively; (6 and 7) Debility and chlorosis, 4 cases respectively; (8) Strain of heart, 3 cases; (9, 10, and 11) Exophthalmic goître, aortic disease, and aortic with mitral disease, 2 cases respectively; (12 and 13) Neurosis and dilatation of the aorta, with bronchitis, 1 case respectively. Many of these cases did not present a murmur audible over the tricuspid area. Of the whole 83 cases in the tricuspid area, there were 38 instances of pure first sound, 15 of impure first sound, and 30 of systolic murmur. A tricuspid systolic murmur is not the only unequivocal sign of tricuspid regurgitation. Undoubtedly, in all the thirty-eight cases where the first sound was perfectly normal over the tricuspid area, there was tricuspid regurgitation, for a murmur is by no means the most certain sign of any valvular affection. True valvular murmurs have a great tendency to appear and disappear. Alterations of form and change of size, along with modification of cardiac impulse, are very important as evidence.

63. Dr. Thomas refers to a former paper written with an experience of seventy-five cases, with one death, up to 1875. The present report adds one hundred and thirty-two cases observed during the last four years, with only two deaths. *Carbonate of ammonium* prevents the accumulation of carbonic acid by promoting oxygenation, and renders the blood alkaline. It checks exudation, as in pneumonia. The dose is from two to three grains to an infant from six to twelve months old, in elm mucilage, by the mouth, and from five to six grains, in the same menstruum, by the rectum. Dr. Thomas now gives twenty to fifty grains, or from a half to one teaspoonful in the pneumonia of adults. As a summary, the author formulates the following propositions: 1. In every form of pneumonia it is the best single remedy, and is indicated in all cases, in connection with any other additional treatment that may suggest itself to the practitioner. 2. In the great majority of cases of croupous pneumonia, in connection with counter-irritation, when indicated by the amount of pain, aided by proper alimentation, it will abort the disease, and cut short its course several days, when the directions given in this paper are carefully followed. 3. In all the suffocative cases in children or adults, whether the result of acute capillary bronchitis *per se*, or coincident with the exanthemata, it is the remedy *par excellence*. 4. Judging only from a very limited trial of it (in only five cases) in diphtheria, it is far superior to alcohol, and does seem to possess the power of dissolving the membranous exudation, and, with or without local treatment, in connection with the tincture of the chloride of iron, and small doses of quinia, it has, in his hands, produced better results than any treatment. 5. It is without doubt of great value in croup, and, in many cases, will be found, on trial, to rival, if not excel, any one of the usual remedies—to be equal to, and much less dangerous than, tartarized antimony. And in the suffocative stages of simple croup it is a *sine quâ non;* and, aided by cold compresses to the throat, may prove of great value in the membranous form. 6. He has more confidence in the aborting power of carbonate of ammonium, with quinia, in whooping-cough, than in any other plan of treatment yet suggested. 7. It is certainly a prophylactic in heart-clot, and has often, no doubt, prevented death from this cause in pneumonia. 8. It will probably dissolve emboli, after they are formed and deposited in the venous or arterial system. 9. It has more claims, theoretically, as a curative agent in heart-clot than any other known agent, and should be given a trial in every case recognized in time.

65. The first patient mentioned in Dr. Thomas's article on *apoplexy of the lung from cardiac disease* was a man, aged forty-three, a roller by trade, who had evidently indulged freely in eating and drinking all his life. He suffered from bronchitis, aggravated by a much-dilated, flabby, degenerated heart, which could not with sufficient force pump the blood onward from the left ventricle, and thereby produced engorgement of both lungs, the blood-vessels of which had, no doubt, undergone fatty changes, and were ready at any time, if the patient underwent severe exertion, to give way. In the lower part of the right lung a clot was found post mortem, which had acted as a foreign body and set up a localized pneumonia around it. The second case was that of a young woman, aged twenty-three, who had suffered, when about fifteen years of age, from a severe attack of rheumatic fever with endocarditis. This had left behind chronic mitral regurgitant disease, in consequence of which she had also suffered ever since from chronic bronchitis, which was always worse in winter. She now had a serious attack of hæmoptysis, brought on by nursing a baby. The cough was severe, and the quantity of blood expectorated was great. Her pulse was weak, a loud systolic mitral murmur was heard, and the lower part of the left lung was dull. These symptoms continued, with difficulty of breathing, for four days, when she died. Post-mortem examination showed the left heart dilated and hypertrophied, and the tongues of the mitral valve thickened and irregular. Both lungs were dark and slightly œdematous; the left lower lobe was solid, in some parts almost black; the tubes were filled with blood; and pieces of the lung sank in water.

71. In his article on the *climatic treatment of consumption*, Dr. Anderson says that Davos is 5,200 feet above the level of the sea, prettily situated in a valley of considerable breadth, which runs N. N. W. and S. S. E., so that the sun shines upon it for many hours even on the shortest winter days. Its soil is dry, and the air is still, for, except toward the S. E., it is sheltered by high mountains in every direction, while of course it is highly rarified, being nearly one fifth lighter than it is at the level of the sea. The months of December, January, and February are those during which patients at Davos are most certain to be benefited, and if they do not improve then, and if there is no sufficient cause to account for it, their future prospects are far from bright. The class of cases which are most certain to do well are those of non-hereditary, uncomplicated, chronic phthisis, in which the extent of lung-tissue involved is not excessive—with this proviso, however, that while the prognosis of phthisis with pronounced stomach symptoms is not good at home, these are the very cases in which the patients should be sent to Davos, for there the appetite usually improves rapidly, and the digestive organs soon resume their normal vigor. Hæmoptysis does not constitute a contra-indication. Laryngeal phthisis is only a little less likely to terminate unfavorably at Davos than in Great Britain. The causes of benefit are: 1. Elevation, with its rarified atmosphere, bracing coolness, and its purity and antiseptic qualities. 2. Intensity of solar radiation, and the dryness and stillness of the air. 3. Accommodations are good, the sanitary arrangements excellent, the diet wholesome and nutritious, and the mode of living of the invalids (in the open air the greater part of the day, even in the depth of winter) carefully supervised by excellent medical men. Dr. Anderson gives notes of a few cases of advanced phthisis examined by him there, to illustrate the effects of a residence at Davos.

76. The *treatment of pulmonary cavities by paracentesis* is illustrated by the case of a man, aged forty-nine, of previous good health, but intemperate habits, who, in December, 1878, had had bronchitis, followed, in the ensuing February, by pleuro-pneumonia and fœtid expectoration. He improved after a time, but relapsed again in July, and in August was admitted into the Middlesex Hospital, under Dr. Powell's care. On admission, the physical signs showed consolidation of the lower lobe of the right lung, with excavation of its central portion, the cavity signs being centred about the level of the seventh dorsal spine, in the line of the scapula. There were considerable hectic, diarrhœa, and anorexia. The breath and expectoration were extremely fœtid, the latter being muco-purulent in character and very abundant, amounting to about one pint in the twenty-four hours. Paracentesis was performed September 11th. A medium-sized aspiration-trocar was first thrust in at the eighth space in the mid-scapular line, and, a free incision having been made through the tissues down to the intercostal membrane, the fine trocar was withdrawn and a full-sized hydrocele trocar inserted, which, after slightly enlarging the opening, was in its turn removed, and a large drainage-tube introduced. Carbolized dressings were applied. A moderate quantity of secretion escaped from the wound (which gave rise to no serious bleeding), and the subsequent discharge from the tube, although free, was never abundant. The expectoration and cough, however, at once ceased almost entirely. The wound was dressed daily under the carbolic spray, with a view of disinfecting it and the cavity, and injections of Condy's solution were used. On October 2d there was some return of fœtor of the breath, that of the discharge from the tube having never quite been corrected. The channel was kept dilated, and the patient improved in strength, and on the 20th was removed to Brompton Hospital. Fœtor of the sputa returned toward the end of the month, however, although the amount expectorated continued to be very scanty. The patient lost ground rapidly, and was finally seized with pleuro-pneumonia on the opposite side, of which he died on October 31st, fifty days after the operation. The post-mortem examination revealed the presence of several inter-communicating cavities in the lower lobe of the right lung. This lobe was firmly adherent throughout, and a drainage-tube, passing through the eighth intercostal space, entered a contracted cavity which was connected with the main cavity by a short dilated bronchus. The rest of the lobe was densely consolidated by fibroid growth surrounding bronchiectatic cavities. There were broncho-pneumonia and effusion on the left side. The other parts of the lungs were emphysematous. The authors comment upon the encouraging fact of the cessation of cough and expectoration after the operation. It was clear, from the small amount of discharge compared with the great previous quantity of expectoration, that the bulk of that expectoration had been yielded by the bronchi, irritated by the acid fluids and gases in their passage from the cavities. They deprecate interference with apex cavities, on the ground of its being rarely necessary or useful, and are averse, save in exceptional instances, to making incisions into acute basic abscesses of the lung.

81. According to Dr. Hunt, no single physical sign is by itself diagnostic of *pleural effusion:* it is the evidence afforded by the sum of them that we have to consider, and even when all the recognized physical signs are present their presence may be due, not to a collection of fluid in the pleura, but to a malignant growth in the lung. The most important sign in the adult patient is the absence of vocal fremitus. But it is not always absent. Next in importance is the displacement of neighboring organs, especially the heart. A third common physical sign is a want of uniformity between the two sides. The disease most closely simulating pleural effusion is cancer of the lung; but in the latter the bulging is not so marked nor so uniform; the extent of dullness never varies with the change of the patient's position; and the displacement of the heart and other organs is generally less marked. Above all, we have, in doubtful cases, a certain aid to diagnosis in the aspirator needle, or, which is preferred, the needle of the hypodermic syringe, and with this the character of the fluid can also be determined. In the case of *serous* effusions, the writer recommends at the outset leeches, followed by linseed-meal poultices and strong diaphoretics; afterward, if there be no improvement, diuretics; but the drug on which he places the most reliance is jaborandi. It must be pushed rapidly, so as to cause extreme diaphoresis—commencing with thirty minims four times a day, and increasing to a drachm or a drachm and a half every two or three hours—and this to be followed by some tonic (especially the perchloride of iron). The diet should be nourishing, and stimulants should be given if required. *Aspiration* is resorted to, in cases of moderate effusion, after a trial of internal remedies for two or three weeks without evidence of diminution in the amount of fluid. In abundant effusions, after unsuccessful internal treatment for a week or ten days, or where the pleura is full, the heart much displaced, and signs of interference with the action of the other lung are present, the operation ought to be performed, and it should be done slowly. *Purulent* effusions should at first be treated by aspiration frequently repeated, every two or three days, removing a small portion of pus at a time. If this fails, a free outlet must be made. This is best done by making a double opening into the chest-wall and passing a drainage-tube through. The cavity should then be washed out once or twice a day. The cure is hastened by antiseptic precautions at the operation, and antiseptic dressings. As the chest-wall falls in, it is frequently necessary to gouge away a portion of the ribs to make room for the drainage-tubes, or to protect them by metal piping or a piece of strong quill.

85. Dr. Worrell, in his article on *bloodletting in pneumonia*, observes that the paramount condition is to relieve the engorged vessels as quickly as possible, and thus prevent those effusions which always render the disease a grave one. The abstraction of blood directly from the general current is the only rational mode of arresting the flame already spreading. By the abstraction of blood we lessen: 1. The plethora of the vessels; 2. The number of red corpuscles; 3. The force of the heart's impulse; 4. The excitement of the nervous system. By all these influences venesection has the effect to diminish the vascular excitement which belongs to inflammation, and thus diminish the liability to disintegration. He does not regard

pneumonia as an infective disease, and believes that "no standard work of American authorship has espoused this new theory."

97. Dr. M'Gown's patient with *intestinal obstruction* was a gentleman of regular habits, whose early symptoms were refusal of food, slight diarrhœa, and tympanitic distention of the abdomen; all of which continued more or less for *nine months*. He complained of no pain, and vomited only when forced to take more food than he liked. Three months after the disease was first noticed, the legs became very œdematous, and at the end of the nine months were greatly swollen, with blisters in several places, from which fluid oozed. The great pressure in the bowels produced a very large inguinal hernia, which could be easily reduced, but could not be kept up. The urine was never albuminous. The heart's action was feeble; the pulse forty. All other measures failing to relieve the patient, puncture of the colon was resorted to. No chloroform was given. A trocar and cannula were thrust into the middle of the transverse colon; the gas blew off for a few minutes, and when the bowel was half emptied of gas it was strongly drawn to the left side by its own peristaltic action; the cannula was laid down on the walls of the abdomen, and liquid fæces escaped from it. The thumb was placed on the mouth of the cannula, and a small quantity of tepid water was injected into the bowel. The cannula was withdrawn, and the wound was covered with adhesive plaster. Three hours after the operation the patient had a very copious discharge of dark, clayish, liquid fæces, followed in an hour by a second. Seven hours after the operation a large quantity of gas was passed per anum, and by the next morning the abdomen was quite flat, and the distention completely gone. The kidneys now began to act vigorously. At the end of three days the œdema of the limbs had disappeared. The pulse rose from forty-eight to seventy. The patient at the time of the report was improving and gaining flesh rapidly. Dr. M'Gown states his opinion that the bowel liberated itself at the time of the operation, and that had chloroform been given, the peristaltic action of the bowel would have been lessened, and the operation would not have terminated so well.

108. *Metaphosphoric acid as a test for albumen* is available after nitric acid has ceased to give a reaction. In using it, care should be taken that the solution is freshly made, and that no heat is applied to dissolve it, as it is a very unstable acid, and readily decomposes. The plan adopted by Dr. Grigg is to put a piece of the acid of about the size of a pea into a drachm of distilled water. The urine can be added to the solution, or the acid solution to the urine. If there be a trace of albumen, the urine will immediately become turbid, and of a milky-white color.

109. The first part of Dr. Saundby's investigation of *albuminuria* was directed to the question of whether the body in the urine coagulated by heat or precipitated by neutralization was serum-albumen or paraglobulin. Experiments were also undertaken to decide (1) whether albumen was increased after eating, and (2) to determine whether the albumen passed after eating diffused more readily than that passed before taking food. As a rule, the albumen appeared to diffuse in proportion to the acidity of the urine. The diffusate bore no relation to the quantity of albumen present in the urine. The facts appeared to warrant the following conclusions: 1. The body present in urine which is coagulated by heat or precipitated by neutralization is almost invariably serum-albumen, rarely paraglobulin. 2. The presence of paraglobulin alone in the urine is still somewhat obscure, and has not been correlated with any clinical group of cases. 3. The maximum amount of albumen excreted by the kidneys is during the after-breakfast period, and this relation is maintained in spite of the more albuminous character of the midday meal. 4. While there can be no doubt that nitrogenous diet increases albuminuria, this is not due to the absorption of undigested albumen, but to the increase of nitrogenous excreta, and the consequent stimulus to the usual functions.

QUARTERLY REPORT ON MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

No. II.

By GASPAR GRISWOLD, M. D.

1. Primavera, G.—Delle principali colorazioni che le urine subiscono naturalmente per opera de' medicinali. "Giorn. Internaz. delle Sci. Med.," 1, 1880.
2. Fasce, L.—Osservazioni sperimentali e considerazioni generali sull' azione curativa del bagno. "Giorn. Internaz. delle Sci. Med.," 3, 1880.
3. Jacobi, M. P., and White, V. A.—On the use of the cold pack followed by massage in the treatment of anæmia. "Arch. of Med.," June, Aug., 1880.
4. Villafranca, B.—Las aguas de Caldas de Besaya. "Anales de la Soc. Españ. de Hidrol. Med.," 12, 1880.
5. Schuster.—Bemerkungen über die Indikationen zu den Aachener Thermen. "Memorabilien," April, 1880.
6. Bianchi.—Contribuzione clinica alle applicazioni dei metalli, della magnete, e delle leggieri correnti galvaniche. "Giorn. Internaz. delle Sci. Med.," 2, 1880.
7. Gruber, J.—Die Elektrotherapie in der Privat-Praxis. "Med.-chir. Centr.-Bl.," March 12, 1880.
8. Thomson, W. H.—The prophylactic use of cod-liver oil. [N. Y. Acad. Med.] "Boston Med. and Surg. Jour.," June 17, 1880.
9. Heger, P.—Sur le pouvoir fixateur de certains organes pour les alcaloïdes introduits dans le sang qui les traverse. [Acad. des. Sci., Paris.] "Gaz. Méd. de Paris," June 12, 1880.
10. Sturges, O.—On the occasional service of alcohol in the treatment of pneumonia. "Lancet," May 22, 1880.
11. Churchill, F.—The therapeutic value of the hypophosphites (iron, soda, lime, and magnesia) combined soluble tonic for children, etc. "Brit. Med. Jour.," March 27, 1880.
12. Ringer, S., and Murrell, W.—On glycerine in flatulence, acidity, and pyrosis. "Lancet," July 3, 1880.
13. Kretzschmar, P. H.—Notes on pepsin. "Proc. of Med. Soc. of County of Kings," May, 1880.
14. Bourru.—De l'action comparative du sulfate de cinchonidine et du sulfate de quinine dans le traitement des fièvres intermittentes. "Bull. Gén. de Thérap.," May 15, 1880.
15. Griswold, G.—Pilocarpin in intermittent fever. "N. Y. Med. Jour.," Aug., 1880.
16. Flint, A.—Clinical lecture on the treatment of rheumatic fever with benzoate of soda. "Med. Gaz.," May 22, 1880.
17. Cutter, E.—The active and passive inhalation of the nascent chloride of ammonium in acute affections of the respiratory tract—influenza; rhizopod colds; typhoid pneumonia; bronchitis, especially capillary, etc. "Virg. Med. Monthly," May, 1880.

18. Sawyer, J.—Therapeutic notes, with especial reference to the treatment of phthisis by chloride of calcium. "Brit. Med. Jour.," June 5, 1880.
19. Murrell, W.—Cheken in winter-cough. "Practitioner," May, 1880.
20. Lush, W. J. H.—Cases of neuralgia treated with tonga. "Lancet," May 29, 1880.
21. Gassicourt.—De l'emploi du bromure de potassium dans la diphthérie. "Gaz. Hebdom.," May 14, 1880.
22. Ott, I.—Bromide of ethyl; its toxicological action. "Detroit Lancet," June, 1880.
23. Dessau, S. H.—The subcutaneous use of hydrobromide of cinchonidia in the summer diarrhœa of children. "Med. Record," July 3, 1880.
24. Anderson, E. A.—Vaccinium crassifolium aut repens. "N. Carolina Med. Jour.," April, 1880.
25. ———.—Gelseminum sempervirens. [Editorial.] "Brit. Med. Jour.," June 5, 1880.
26. Ringer, S., and Morshead, E. E.—On the physiological action of the bulb of the buphane toxicaria, or hemanthus toxicarius; amaryllidaceæ. "Arch. Med.," June, 1880.
27. Kunze, R. E.—Cereus Bonplandii in neuralgia. "Therap. Gaz.," April, 1880.
28. Dujardin-Beaumetz.—De l'action physiologique et thérapeutique des sels de pelletiérine. "Bull. Gén. de Thérap.," May 30, 1880.
29. Ott, I.—A new narcotic—piscidia erythrina—Jamaica dogwood—its physiological and toxicological action. "Detroit Lancet," June, 1880.
30. Rouse, W. H.—Piscidia erythrina—Jamaica dogwood. "Therap. Gaz.," May, 1880.
31. Grinnell, F.—Iodine as a substitute for quinia. "Trans. Med. Soc. of Tennessee," 1880.
32. Guitéras, J.—On the therapeutic advantages of administering iodide of potassium during fasting; with some remarks on interstitial hepatitis with enlargement of the liver. "Phil. Med. Times," June 5, 1880.
33. Lawrence, R. M.—The therapeutic value of the iodide of ethyl. "Med. Record," June 19, 1880.
34. Bochefontaine et Doassans.—Sur l'action physiologique du thalictrum macrocarpum. [Acad. des Sci., Paris.] "Gaz. Hebd.," June 25, 1880.
35. Cheesman, H.—On the use of cerium oxalate for the relief of cough. "Med. Record," June 12, 1880.
36. Garel, J.—Contribution à l'étude de la métallothérapie interne. "Rev. Mens. de Méd. et de Chirurg.," June, 1880.
37. Blackwell, E. T.—On calomel as a laxative and local antiphlogistic. "Phil. Med. Times," July 17, 1880.
38. Bufalini, G.—Contribuzione all' uso terapeutico del podofillino nella colelitiasi. "Giorn. Internaz. delle Sci. Med.," 2, 1880.
39. Sée G., et Bochefontaine.—Sur les effets physiologiques de l'érythrophléine. [Acad. des Sci., Paris.] "Gaz. Méd. de Paris," June 26, 1880.
40. Reichert, E. T., and Mitchell, S. W.—On the physiological action of potassium nitrite. "Am. Jour. Med. Sci.," July, 1880.
41. Girard, E.—De l'emploi des injections sous-cutanées de sulfate neutre d'atropine dans les cas d'incontinence d'urine et d'œsophagisme. "Bull. Gén. de Thérap.," June 15, 1880.
42. Jones, J. T.—The physiological action of atropia as demonstrated by experiment. "N. O. Med. and Surg. Jour.," June, 1880.

43. Oglesby.—Toxic effects from use of atropine. [Leeds General Infirmary.] "Lancet," May 1, 1880.
44. Bartholow, R.—Duboisia. "Therap. Gaz.," May, 1880.
45. Dujardin-Beaumetz.—Emploi de la duboisine dans la maladie de Basedow. [Soc. de Thérap., Paris.] "Gaz. Hebdom.," July 2, 1880.
46. Tweedy, J., and Ringer, S.—On the mydriatic properties of homatropin, or oxytoluyltropein, with an account of its general physiological action. "Lancet," May 22, 1880.
47. des Chenais, L.—Cœur et digitale. "Gaz. Hebdom.," July 2, 1880.
48. McKie, T. J.—Veratrum viride in the treatment of eclampsia and tetanus. "Obstet. Jour. of Gr. Brit. and Ire.," May, 1880.
49. Park, R.—Some cases in which morphia has been administered in large doses hypodermically; with remarks. "Practitioner," June, 1880.
50. Boissarie.—De l'ergotine, de ses inconvénients et de ses dangers. "Gaz. Hebdom.," May 14, 1880.
51. Reynolds, H. T.—Some uses of ergot. "Virg. Med. Monthly," May, 1880.
52. Michel, J.—Des injections sous-cutanées d'ergotine. "Gaz. Hebdom," April 30, 1880.
53. Kauffeisen, Z.—Préparation de l'ergotine. "Gaz. Hebd.," June 4, 1880.
54. Harkin, A.—On some important therapeutic effects of chlorate of potassium. "Dublin Jour. Med. Sci.," May, 1880.
55. Marchand. — Intoxication durch chlorsaure Salze. [Versamml. deutsch. Naturf. u. Aerzte.] "Med.-chir. Centralbl.," May 14, 1880.
56. Silke, G. B.—Notes of a case of death during the administration of chloroform; with remarks as to the possible and probable causes of death. "Edinburgh Med. Jour.," May, 1880.
57. Mattison, J. B.—A remarkable case of chloral and chloroform inebriety. "Proc. Med. Soc. of County of Kings," July, 1880.
58. Park, R.—Three cases of poisoning. "Chicago Med. Gaz.," May 20, 1880.
59. Gray, G.—Attempted suicide by strychnia successfully treated by hydrate of chloral. "Brit. Med. Jour.," March 27, 1880.
60. Nursey, C. F.—Case of poisoning by oxalic acid. "Lancet," May 1, 1880.
61. Guareschi, I.—Ricerca dell' arsenico in tossicologia. "Giorn. Internaz. delle Sci. Med.," 1, 2, 1880.
62. Morris, A. W.—A case of poisoning by phytolacca decandra. "Med. and Surg. Reporter," June 5, 1880.
63. Park, R.—Cases of poisoning with the seeds of the castor-oil plant. "Glasgow Med. Jour.," May, 1880.
64. Jackson, W. F. M.—Danger attending the administration of Chian turpentine. "Brit. Med. Jour.," June 26, 1880.

9. Heger, in his remarks on *the power of certain organs to retain alkaloids passing through them in the blood*, states that, if an isolated organ, still alive, be subjected to a circulation through it of defibrinated blood containing in solution a certain dose of an alkaloid (nicotine, atropine, quinine, etc.), it will be found that a certain proportion of the drug will remain in the parenchyma of the organ, having escaped through the coats of the capillaries. This portion of the drug, which is retained by the organ in spite of its vessels being thoroughly rinsed, may be recovered by chemical analysis. In this manner it may be shown that the liver retains a third of the whole quantity of nicotine circulating through its vessels. One or two milligrammes of nicotine injected into the portal vein of a living animal will be fixed in the liver and retained. This property of absorbing alkaloids is possessed in the highest degree by the liver; the lungs absorb alkaloids only to a very slight extent. If 88 centigrammes (gr. 5¾) of nicotine be injected into the portal vein of a living dog, only 17 centigrammes (gr. 2½) can be recovered from the hepatic veins; the remaining 21 centigrammes (gr. 3¼) are fixed in the parenchyma of the liver. The same is true of quinine, morphine, and strychnine. If a certain dose of an alkaloid be injected into the femoral artery, six sevenths of the quantity can be recovered from the femoral vein; this represents absorption of one seventh by the muscles. The lungs do not absorb appreciable amounts. It is well known that morphia and other alkaloids cause cardiac disturbance when injected into a vein (other than the portal); this disturbance is not seen after injection of the same dose into the portal vein. This is to be explained by the retention of a large part of the medicine in the liver in the latter case. Alkaloids thus retained in the liver pass out again in a few hours, and may be discovered in different fluids—nicotine in the lymph coming from the liver, strychnine in the bile.

13. Mention is made of the different opinions held by the profession with reference to the efficacy of *pepsin*—some praising it extravagantly, while others consider it inert, and never prescribe it. Its failure to act in some cases is then explained by the fact that it is often given in combination with incompatibles, such as alkalies, strong preparations of iron, alcoholic preparations, etc. All elixirs and complex mixtures containing it are condemned, and it is also stated that it acts but slowly when prescribed in neutral mixtures, and is incompatible with bismuth. Pepsin digests pancreatine, the result being that both eventually become inert; hence it is unadvisable to give the digestive mixtures which purport to contain all the physiological fluids. The following is the best combination: ℞. Pepsin, sacch., gr. xv; acid. hydrochlor. dil., ♏ xv; glycerinæ, fʒ ij; aquam ad f℥ ij. Sig. Dose after meals. A preparation which will not act out of the body will certainly not act in it, hence the advisability of testing. This is best done by mixing one grain of pepsin, one hundred grains of hard-boiled-egg albumen, one thousand minims of water, and twenty minims of hydrochloric acid. Good pepsin should act upon one hundred parts of albumen in one thousand parts of water containing two per cent. of acid.

14. The author has made careful clinical researches with reference to the extent to which the *sulphate of cinchonidine* may be substituted for the much more expensive sulphate of quinine in the treatment of malarial affections. He calls attention to the fact that, to act effectively, it should be given from five to seven hours before the time for the occurrence of the paroxysm; departure from this rule seems to interfere with the action of cinchonidine more than with that of quinine, perhaps because the action of the former is less intense or less durable. The administration of cinchonidine is not followed by vertigo, tinnitus aurium, disturbances of vision, or the other inconvenient symptoms induced by quinine. A study of twenty-nine cases of malarial intermittent fever, treated by the author with sulphate of cinchonidine, the dose varying from eight decigrammes (gr. xij) to one gramme (gr. xv), gives the following results: In sixteen cases the sulphate of cinchonidine was given alone, and cut short the fever. In ten of these cases no paroxysm occurred after the first dose. These comprised five cases of quotidian type, four of tertian, and one of quartan. In four cases two doses were necessary before the paroxysms ceased to occur; one of these was of quotidian type, and the remaining three were of tertian. In two cases three doses were required to accomplish a cure. One of these was of quotidian type, and the other of quartan. In all these cases it was observed that the medicine failed to prevent the occurrence of the paroxysm when it was given too long, or not long enough, before it. In eight cases in which quinine had previously failed, cinchonidine was successful. Three of these were of quotidian type, three were of tertian, and two were of quartan. In three other cases, quinine and cinchonidine both alike failed to effect a cure. In two cases, in which the fever was associated with inflammation of the liver and biliary passages, perhaps of malarial origin, the sulphate of cinchonidine acted very satisfactorily, seeming even to affect favorably the progress of the hepatic trouble. To sum up, of twenty-seven cases of malarial intermittent fever, treated with sulphate of cinchonidine, twenty-four were cured, three were not cured, resisting quinine also. Two cases of malarial intermittent fever, complicated with hepatic disturbances, were cured by the remedy.

19. The fluid extract of *cheken*, one or two teaspoonfuls every four hours, has proved beneficial in a large number of cases of chronic bronchitis, and even in non-progressive phthisis without fever. No investigations as to its physiological action seem to have been made. It is variously written cheken, chekan, or chequen; is an evergreen shrub of Chili, and has been used for years in bronchial affections by the physicians of Valparaiso. It has been given in as large doses as an ounce, or an ounce and a half, three times a day, in the form of fluid extract, without producing any disagreeable effects.

20. Dr. Lush reports five cases of obstinate and severe *neuralgia treated with tonga.* In some cases the alcoholic extract was given in teaspoonful doses, in a wineglass of water, every four hours; in others, a wineglass of the infusion at about the same intervals. Marked benefit was experienced in four cases after the second or third dose, and the pain was entirely relieved by the fifth or sixth; no toxic symptoms were observed. The fifth case was one of sciatica; tonga was given (the infusion) for three days without benefit, and was then discontinued.

21. Dr. Anderson believes that he is the first to introduce *vaccinium crassifolium vel repens as a diuretic.* He gives a botanical description of it, stating that it resembles uva ursi. Large doses of the decoction are followed by profuse diuresis; the bitartrate of potassium may with advantage be given in combination, in suitable doses. The author has not studied the action of the remedy carefully; he merely deduces from clinical observation that it is a diuretic, and acts efficiently in removing dropsical effusions. The medicine may be obtained from John K. McIlhenny, druggist, corner Market and Front streets, Wilmington, N. C.

22. On March 31, 1879, M. Tanret reported to the Academy of Sciences, of Paris, that he had separated from pomegranate bark four alkaloids, possessing in concentrated form the properties of the original drug. To these he gave the names *pelletiérine*, isopelletiérine, pseudopelletiérine, and methylpelletiérine; their physiological actions seem to be identical, but they vary much in strength in the order in which they are enumerated above, beginning with the most powerful. M. Dujardin-Beaumetz, after careful experiments as to their physiological and therapeutical actions, reports the results of his investigations as follows: 1. The alkaloids of the pomegranate bark, and in particular the sulphates of pelletiérine and isopelletiérine, possess real and active physiological properties. 2. The alkaloids cause paralysis of motor nerves, sensation remaining unaffected. Muscular contractility is intact, and the peripheral ends of the motor nerves seem to be the organs first and principally attacked; the action of the alkaloids is very similar to that of curare. 3. The sulphates of pelletiérine and isopelletiérine are active tæniacides, and, in the dose of 30 centigrammes (gr. ivss) in a solution containing 50 centigrammes (gr. vijss) of tannic acid, they cause the expulsion of the worm, head and all. (Dujardin-Beaumetz had 37 successes in 39 cases of tænia; Laboulbène, 19 successes in 19 cases.) The following is the method of employing pelletiérine as a tæniafuge: a light supper the evening before; in the morning, the dose given above, taken fasting. A quarter of an hour afterward, a glass of water; half an hour afterward, 30 grammes (f ℥ vijss) of brandy. Some now give infusion of senna, others castor oil. The worm is expelled about four hours after the pelletiérine has been taken. This course of treatment may with advantage be preceded by slight purgation. The worm is probably paralyzed by the pelletiérine, and is expelled in this condition by the purgative. Pelletiérine produces cerebral congestion and hyperæmia of the retina; these conditions are attended with attacks of vertigo and contraction of the pupil. The toxic properties of the agents under discussion are so well marked as to render their administration to children of questionable propriety; the author has never given them to any one under fourteen years of age. Acting on the resemblance of the action of pelletiérine to that of curare, its administration was tried in two cases of tetanus, but without encouraging results. The author thinks that its power to cause a determination of blood to the retina may be utilized in ophthalmology. As in the case of many other alkaloids, the ones in question produce their best effects when administered hypodermically.

30. The author reports that *Jamaica dogwood* (*piscidia erythrina*) is less powerfully anodyne, but more decidedly hypnotic than opium. Its use is not followed by anorexia or headache, the sleep induced by it being natural. No effects beyond those which it produces as an anodyne and hypnotic have been remarked; it does not seem, in ordinary doses, to affect the organs of circulation or respiration particularly. It does not constipate or interfere with digestion. The author has given it with very gratifying results in uterine cancer, neuralgia, rheumatism, intestinal colic, and toothache. Its effect is less durable than that of opium, and it must therefore be given at shorter intervals. It acts rapidly, often relieving pain in five minutes. The fluid extract is given in twenty-minim doses every three hours, increased if necessary.

39. *Erythrophleine* is the active principle obtained from the bark of erythrophleum guinense. Its action is in many respects similar, and its toxic power about equal, to that of the amorphous digitaline of Homolle and Quevenne. The symptoms of poisoning are vomiting, feeble and rapid action of the heart, and labored breathing; the last continues after the heart has ceased to beat. In medicinal doses, arterial tension is very much increased; the action of the heart is at first slower and stronger, then rapid and feeble (this effect is similar to that of digitalis); the respirations are at first deep and full, but become labored and more rapid as the heart fails. In an animal under the effect of erythrophleine, faradization of the peripheral ends of the pneumogastrics does not slow the heart, but does cause a sudden and marked fall in the arterial pressure; faradization of the central ends does not accelerate the pulse, but does increase arterial pressure. Hence we have the action of stimulation of the pneumogastrics lost upon the heart, but preserved upon the vaso-motor system. After death the heart is found in diastole; generally the cardiac muscle still responds to electric stimulation. Further researches are being made. [Those interested in the subject will find it most fully and clearly discussed under the the head of *casca bark*, in "Medicine Past and Present," a very recent work by Dr. T. Lauder Brunton.]

43. *Toxic effects of atropine applied to the eye* were observed in the case of a healthy man, seventy years of age, who was operated upon for cataract. December 6th he began to drop into the eye twice a day a two-grain solution of atropine; this was done for three days. On December 9th a four-grain solution was dropped into the eye once. December 12th, six drops of a ten-grain solution were ordered to be used every third hour. On December 16th the man's mouth was dry, his voice was husky, and the pupil of the sound eye was dilated; there was no eruption, but the face was vacant and delirium was beginning to supervene. He was ordered sulphate of morphia, gr. $\frac{1}{8}$ hypodermically, and mist. sennæ co. f. ℥ ij. In a few hours his symptoms had disappeared. The quantity of atropia introduced into the eye was gr. j. The same solution has often been used without producing toxic effects.

44. The alkaloid *duboisia* is almost exactly similar to atropia; it presents, however, some points of difference: 1. It is twice as soluble in water as atropia; 2. It is a stronger base; 3. Its reaction to sulphuric acid and bichromate of potassium is different from that of atropia; 4. It is less irritating to the conjunctiva, dilates the pupil more rapidly, and the patient recovers earlier from its effects. In diseases of the eye duboisia is in general preferable to atropia, acting more rapidly; the refraction of the eye can be determined much better by means of duboisia. The author thinks that duboisia is destined to take the place of atropia in the treatment of night-sweats, and as a remedy for the various nervous affections of the respiratory organs. It will prove to be a valuable cardiac stimulant, and is superior to atropia as an anodyne and hypnotic. The dose is gr. $\frac{1}{60}$ - $\frac{1}{120}$.

45. In two cases, the author has obtained very good results with *hypodermic injections of duboisia in exophthalmic goître.* The patients were rendered more comfortable, there being a marked diminution of cardiac palpitation and arterial pulsation; it is to be noted that these comprise the only good effects claimed for any treatment of exophthalmic goître. The author noticed a cumulative effect, in spite of the small doses given (a quarter of a milligramme—gr. $\frac{1}{250}$—or at most half a milligramme—gr. $\frac{1}{125}$). In a few days the symptoms of poisoning made their appearance, similar to those caused by belladonna. On this account it was necessary to intermit treatment every eight days, and to be careful not to continue it too long. The solution employed was as follows: Neutral sulphate of duboisia, one centigramme (gr. $\frac{15}{100}$); aquæ lauro-cerasi, twenty grammes (f ʒ v). Sig. M. ♏xv contain half a milligramme (gr. $\frac{1}{125}$).

49. In a paper on the effects of *large hypodermic doses of morphia*, the author calls attention to the fact that, apart from special interfering conditions, the sedative, anodyne, and hypnotic effects of morphia do not always go together. Even when administered hypodermically in large doses, the hypnotic effect may not be obtained. In cases of mania especially, the tolerance is very great. The following cases are noticed as corroborating these views: CASE I.—A woman, thirty-six years of age, suffering from delirium tremens, and unable to sleep, was given one quarter of a grain of the sulphate of morphia hypodermically. This produced no effect, and the same dose was given again and again at short intervals, until a grain in all had been administered; still no effect was produced. In half an hour the injections were begun again, and continued until the patient had received in all three grains of morphia. Drowsiness then presented itself, and the patient fell into a sleep which lasted some hours—this without any marked impression upon pupil, respiration, or pulse. In the morning the patient awoke naturally, and was bright and no longer delirious. Four days later, the patient having become violent again, two grains of morphia were injected, but without effect. Two days after this, on a single occasion, five grains were administered, hypodermically, as before; half an hour after this the patient fell asleep, and awoke in a few hours without marked symptoms from the morphia. ═══ CASE II.—A medical man, suffering from sciatica, injected one grain of morphia hypodermically over the affected part night and morning. On one occasion three and a half grains were necessary to still the pain. Sleep was never produced, as far as the author can judge; if the amount of morphia used was greater than was required to annul the pain, insomnia resulted. ═══ Case III.—In a case of ovarian neuralgia, in a patient with hysterical tendencies, doses of one grain and less were of no use whatever. Neither small nor large doses ever produced sleep directly; insomnia frequently resulted. Small doses seemed to increase the appetite; large doses produced nausea and emesis if the erect posture was assumed after their administration; these effects were prevented by the assumption of a recumbent attitude. ═══ Case IV.—A woman with pericarditis, aortic and mitral incompetence, and carditis, had great pain with each pulsation. Three and a half grains by hypodermic injection on a single occasion were often required to produce sleep; this sleep was refreshing, and lasted but a few hours, not being followed by nausea. This patient finally died, but no injections were given for several days before her death. ═══ Case V.—A patient with carcinoma uteri, of ten years' standing, had often received hypodermic injections of morphia. A grain and a half was required to produce relief. It was noticed that nausea followed when the injections were given to the patient in bed; when she received them at the author's office, and walked home in the fresh air, this symptom did not occur. [The criticism is suggested that, in all but the last case, the author neglects to mention whether his patients had been in the habit of taking morphia before the treatment he describes. It may not be superfluous to mention in this connection a case of Dr. Fordyce Barker's, described in detail in his work on "Puerperal Diseases." This patient, twenty years of age, had an attack of puerperal peritonitis after the birth of her first child. She received during a period of eleven days 13,969 drops of Magendie's solution of morphia, 724 of which were given hypodermically; this gives an average administration of 42¼ grains of morphia in twenty-four hours. She made a good recovery.]

QUARTERLY REPORT ON VENEREAL AND GENITO-URINARY DISEASES.

No. III.

By EDWARD B. BRONSON, M. D.,
PHYSICIAN FOR SKIN AND VENEREAL DISEASES TO THE NEW YORK DISPENSARY.

1. Pauli, C.—Ein Beitrag zur Therapie gewisser krankhafter Zustände der männlichen Harnröhre. "Memorabilien," May, 1880.
2. Granier.—Des affections syphilitiques et vénériennes dans les principales villes de France. "Lyon Méd.," May 2, 1880.
3. Kersch.—Zur Pathologie und Therapie der Urethritis beim Manne. "Memorabilien," July, 1880.
4. Kuechenmeister, F.—Die Abortivbehandlung des entzündlichen Stadium des Trippers. "Deutsche med. Wochenschr.," June 5, 1880.
5. Cheyne, W. W.—On a new method of arresting gonorrhœa. "Brit. Med. Jour.," July 24, 1880.
6. Mauriac, C.—Formes cliniques, pathogénie et traitement de la rétention d'urine dans le cours de la blennorrhagie. "Progr. Méd.," April 17, 1880.

7. Kelsey, C. B.—Death from retention of urine in a case of peri-rectal abscess. "Med. Record," July 10, 1880.
8. Wertheim, G.—Behandlung von Orchitis und Epididymitis. "Wien. med. Wochenschr.," June 12, 1880.
9. Breda, A.—Contribuzione allo studio delle lesioni non virulente dell' organo virile. "Gazz. Med. Ital. Prov. Venet.," June 5, 1880.
10. Campana, R.—Ulcera fagedeno-cangrenosa. "Giorn. Ital. delle Mal. Veneree e della Pelle," April, 1880.
11. Otis, F. N.—Sulphide of calcium in the treatment of suppurating buboes. "N. Y. Med. Jour.," May, 1880.
12. Lupò, P.—Sulla cura di taluni buboni suppurati. "Giorn. Internaz. delle Sci. Med.," 2, 1880.
13. Lowndes, F. W.—The Liverpool Lock Hospital and the prevalence and severity of constitutional syphilis in Liverpool. "Brit. Med. Jour.," May 15, 1880.
14. Otis, F. N.—Clinical lecture on the differential diagnosis of syphilis. "Virg. Med. Monthly," June, 1880.
15. Zeissl.—Zur Lehre über die Vererbung der Syphilis. "Wien. med. Woch.," Jan. 24, 31, 1880.
16. Foster, J. P. C.—Hereditary transmission of syphilis. "Proc. Conn. Med. Soc.," 1880.
17. Belluzzi, C.—Osservazioni di sifilide ossea dei neonati. "Giorn. Ital. delle Mal. Ven. e della Pelle," June, 1880.
18. De Luca.—Sul lichen sifilitico. "Lo Sperimentale," Feb., 1880.
19. Minelli, P.—Storia di sifilide tubercolare alla faccia con influenza benefica della risipola. "Giorn. Ital. delle Mal. Ven. e della Pelle," June, 1880.
20. Roddick, T. G.—Rare syphilitic cases. "Canada Med. and Surg. Jour.," June, 1880.
21. Von Sigmund.—Ueber die allgemeine Behandlung Syphilitischer während der ersten Periode dar Erkrankung. "Wien. med. Woch.," April 17, 24, May 1, 1880.
22. Macleod, G. H. B.—Hypertrophy of the prostate gland and its treatment. "Glasgow Med. Jour.," July, 1880.
23. Tüngel.—Zwei Fälle von acuter Phlegmone der Prostate. "Berl. klin. Woch.," Nov. 12, 1880.
24. Warren, J. H.—A new vermicular sound and catheter. "Boston Med. and Surg. Jour.," April 8, 1880.
25. Jessen.—Die Thermen von Baden-Baden gegen Blasenleiden. "Deutsche med. Woch.," July 3, 1880.
26. Post, A. C.—Case of cystitis resulting from stricture, and cured by cystotomy and the application of the actual cautery over the pubes. "Med. Record," May 29, 1880.
27. Weir, R. F.—On cystotomy for cystitis in the male. "Med. Record," June 12, 1880.
28. Ford, W. H.—On the methods of treatment to be adopted in obstinate cases of the cystitis attendant upon hypertrophy of the prostate. "St. Louis Courier of Med.," July, 1880.
29. Oliver, T.—Idiopathic pericystitis, ending in the production of intestino-vesical fistula and double hydronephrosis. "Lancet," May 22, 1880.
30. Browne, G. B.—Unusully large uric-acid calculus successfully removed by lithotrity. "Lancet," June 12, 1880.
31. Keyes, E. L.—Litholapaxy. "Ann. Anat. and Surg. Soc., Brooklyn," June, 1880.
32. Greene, W. W.—Ten cases of litholapaxy. "Boston Med. and Surg. Jour.," July 15, 1880.

33. **Coulson**, W. J.—A third series of cases of stone in the bladder treated by lithotrity and rapid evacuation of the fragments (Bigelow's method). "Lancet," July 3, 1880.
34. **Blanc**, H.—Litholapaxy in Bombay. "Lancet," July 10, 1880.
35. **Duffy**, C., **Jr.**—Lithotrity and evacuation of the fragments at one sitting, without anæsthetics, and without the washing-bottle. "N. Carolina Med. Jour.," May, 1880.
36. **May**, E. H.—A case of litho-nephrotomy. "Lancet," July 3, 1880.
37. **Petersen**.—Ein Fall von Pyonephrosis calculosa mit günstigem Ausgang nach operativer Behandlung. "Berlin. klin. Woch.," April 5, 1880.
38. **Sayre**, L. A.—Clinical lecture on some disorders dependent upon genital irritation. "Med. News and Abs.," June, 1880.
39. **Park**.—Circumcision and the alternative operations. [Glasgow Southern Med. Soc.] "Glasgow Med. Jour.," July, 1880.
40. **Watson**, E.—Clinical remarks on stricture of the urethra. "Lancet," May 8, 1880.
41. **Weir**, R. F.—Lecture on stricture. "Detroit Lancet," June, 1880.
42. **Harrison**, R.—On the treatment of gleet and prevention of stricture by irrigation of the urethra. "Lancet," May 15, 1880.
43. **Teevan**, W. F.—The treatment of stricture of the urethra, enlarged prostate, and stone in the bladder. "Lancet," April 17, 1880.
44. **Mills**.—Chronic pyæmia following urethral dilatation. "Canada Med. and Surg. Jour.," May, 1880.
45. **Ranney**, A. L.—Internal urethrotomy; followed in one case by fatal suppression of urine, and in another by impotence and atrophy of the penis. "N. Y. Med. Jour.," May, 1880.
46. **Ranney**, A. L.—Are the benefits to be derived from internal urethrotomy, as now advocated for the relief of stricture, commensurate with its dangers? "N. Y. Med. Jour.," Aug., Sept., 1880.
47. **König**.—Ein Fall von traumatischer Strictur der Harnröhre, nebst die Behandlung derselben. "Berlin. klin. Woch.," April 12, 19, 1880.
48. **Sorel**, F.—Maladie de Werlhof ayant pour origine probable un traumatisme de l'urèthre. "Gaz. Hebd.," June 25, 1880.
49. **Skinner**, W. T.—A case of laceration of the penis during coition, involving complete severance of the urethra, with infiltration of urine, followed by abscess resulting in urinary fistula. "Phila. Med. Times," April 10, 1880.
50. **Gould**, A. P.—A case of melanotic epithelioma of the penis; amputation; remarks. "Lancet," March 20, 1880.
51. **Terrillon**.—Note sur l'anatomie pathologique de l'hydrocèle simple. [Soc. Anat., Paris.] "Progr. Méd.," June 26, 1880.
52. **Will**, W. O.—The influence of varicocele on the nutrition of the testicle. "Lancet," May 15, 1880.
53. **Desnos**.—Orchite tuberculeuse suppurée. "Progr. Méd.," May 15, 1880.
54. **Gerster**, A. G.—A case of spontaneous gangrene of the testicle. "N. Y. Med. Jour.," June, 1880.
55. **Hammond**, W. A.—Neuralgia of the testis. "St. Louis Courier of Med.," May, 1880.
56. **Vinnedge**, W. W.—Absence of spermatozoa in an otherwise healthy man. "Chicago Med. Gaz.," April 20, 1880.

2. Granier, "*Médecin Aide-Major*" in the garrison at Lyons, gives some interesting statistics relative to the *prevalence of syphilis or venereal diseases in the French army*, showing that these diseases have undergone a very marked diminution in late years. Thus, from 1865 to 1869 the ratio

of these diseases to the number of men in actual service was 106 : 1,000 per annum. During the years 1861 to 1865 M. Didiot had given the ratio for the garrison at Marseilles as 124 : 1,000, or 1 : 8, while the mean duration of treatment varied from 35 to 50 days. In 1872 the ratio was 91 : 1,000. In 1873 it decreased to 80 : 1,000. From the records of the garrison at Lyons for the years 1875 to 1879, Granier reports as follows: In a regiment of 850 men during this period there were 15 cases of syphilis, 16 of soft chancre, and 125 of gonorrhœa; in all, 156 cases. This represents a mean annual ratio of 37 : 1,000. The writer accounts for this small ratio, first, from the fact that Lyons is the city which occupies the lowest position among the cities of France with regard to the prevalence of venereal diseases; and, second, from the fact that during much of the period to which the statistics relate, the regiment was in camp where opportunities for contracting these diseases were greatly diminished. For the purpose of comparing the French with other armies of Europe, the following statistics, collected in 1870, are reproduced: British army, 529 per 1,000; Dutch, 105; Belgian, 100; Portuguese, 96; Austrian, 63; Prussian, 54. It is claimed that these figures can not have changed materially since, for the armies have not been reorganized as the French army has. In France the following are the statistics for ten different cities, taken from the hospital records of the garrisons for the year 1876–'7: Marseilles, 53 per 1,000; Bordeaux, 52; Besançon, 35; Rouen, 27; Rheims, 26; Toulouse, 24; Nancy, 23; Lille, 22; Paris, 21; Lyons, 19. The fact that Paris occupies so low a position in the scale is accounted for by the superior character of the soldiers there, drawn, as they are, from better classes than elsewhere, many of them being married or living "*en ménage parisien.*" In 1877 the number of cases of syphilis and venereal disease treated in the various infirmaries and hospitals throughout the entire army was 27,080 among 460,000 men in actual service, giving a mean of 58 : 1,000. In this is included the African army, which made the ratio considerably larger than it would have been if for France alone. In the army of Algeria, consisting of 45,000 men, there were 2,829 cases of syphilis or venereal disease, or 63 : 1,000.

21. Von Sigmund, in his article on the *treatment of the early period of syphilis*, does not agree with the very prevalent opinion that secondary syphilis can be affected by anti-syphilitic treatment (in the ordinary sense of the term) during the primary stage; and, while he advises abstaining from such treatment during the first six to eight weeks of the disease, he does not do so for fear of retarding the secondary manifestations and thus obscuring the diagnosis, as many allege is the result, but because it is useless and often even injurious. He is convinced from long observation that mercurial treatment at this stage has no influence at all upon the early general manifestations of the disease, and does not prevent any of the subsequent symptoms. He maintains that forty per cent. of all cases of syphilis are of such a mild character that the symptoms would never be noticed, either by the patient or the physician, except on the most critical examination. If anti-syphilitic treatment has been employed at an early stage in cases of this character, it is easy to attribute the mildness or vagueness of the symptoms to the treatment. It is reasoning *post hoc ergo propter hoc.* But, on the other hand, while he deprecates anti-syphilitic treatment in the first stage, he strongly advises what, in a certain sense, may be termed *ante*-syphilitic treatment. That is, the period of latency, while the disease is gathering its powers and preparing for the attack, is occupied in strengthening the patient's defenses. Those parts which are, as a rule, most liable to be affected, chiefly the skin and the regions about the mucous orifices, are subjected to the most careful attention. Everything that pertains to health or to the removal of unfavorable influences acquires an unusual importance. Most of the paper is devoted to the details of this preparatory treatment. While, perhaps, their minuteness is a little tedious, yet they call attention to a subject of unquestionable importance, which a more cursory notice would fail to bring out.

24. Dr. Warren presents a *new vermicular sound and catheter* for passing tight or eccentric strictures. The description given of the instrument is somewhat vague, but the accompanying wood-cut represents a narrow flattened rod of metal, to which a spiral twist is given. The utility of the instrument is urged mainly on theoretical grounds, but its practical advantages over instruments already in use are not very apparent.

27. Weir tabulates 47 cases of *cystotomy for cystitis in the male.* They are divided as follows: By median section, 10 patients, of whom 6 were cured, 3 were relieved, and 1 died; by lateral section, 32 patients, of whom 13 were cured, 4 were relieved, 11 died, and 4 obtained no benefit; by bilateral section, 5, of whom 4 were cured and 1 died. Weir vindicates Willard Parker's claim to priority in this operation very conclusively. Dr. Parker's first case was published in 1851 by Dr. Stephen Smith in the "New York Journal of Medicine."

30. Although the case of *lithotrity* reported by Mr. Browne can not properly be claimed for Bigelow's method, yet it shows indirectly what the method is capable of accomplishing. A gentleman, fifty-three years of age, had long been subject to symptoms of calculus, and had consulted many leading surgeons. Lithotrity had been performed a number of times, with 19 sittings altogether, and a yield of 395 grains of calculus, chiefly uric acid with some phosphates. At the end of these operations, which occupied some mouths, although not relieved of his symptoms, he was assured that no further operation was necessary; that the symptoms were due to one or two remaining fragments, which could be removed only with difficulty, and had better be left alone. The patient finally consulted Sir Henry Thompson, who, on examination, found not only several fragments but a large stone. Ether was administered, but, the patient having emphysema of the lungs, prolonged anæsthesia was deemed unadvisable. Eighteen minutes were consumed in the operation, and 230 grains of hard calculus were removed after crushing and aspiration. At a second sitting, five days later, 248 grains were removed in fifteen minutes. In four days, at a third sitting, 186 grains were removed in ten minutes. In four days more, 98 grains in eight minutes, and at the final sitting, after another four days, 75 grains were removed in eight minutes, which completely emptied the bladder. With the exception of a slight attack of fever and some remaining atony of the bladder, the recovery was immediate and complete. The total amount of calculus removed at these five sittings was 787 grains, or nearly 1¾ ounces, and almost double the amount that had been removed before.

35. In the case of *rapid lithotrity with evacuation* reported by Duffy, the operation of crushing lasted nineteen minutes, during which time the lithotrite was kept continuously in the bladder. The patient was then allowed to pass his urine, discharging a quantity of detritus. Next Nélaton's catheter was introduced, and five ounces of warm water, with a little borax dissolved in it, were injected, and the catheter was withdrawn. The injected fluid was then passed spontaneously, with more detritus. This was repeated several times. The case progressed favorably, and the patient was well enough the day following the operation to leave his room. The greatest diameter of the stone was 24 millimetres (15/16 inch). The weight of the collected detritus was 82 grains. The composition was uric acid and urates.

36. May describes a case of *pyonephrosis, with operation through the abdominal wall and removal of a large impacted calculus.* The history of the case is as follows: Thirteen years before the patient had had a sudden attack of vomiting, with pain in the right side, which attack lasted for a week. On examination by his physician, a lump of the size of a hen's egg was found in the right lumbar region, manipulation of which caused great pain. A few days later it had disappeared. Nothing abnormal had been noticed about the urine. A year later he had a similar attack, which lasted eight weeks. At this time a large quantity of thick, purulent urine was passed, with straining sensations, followed by disappearance of the lump. Since this he had been free from urinary troubles up to the time of his admission to the hospital. He was then in fair health. At times the urine was clear, and at others it was thick and offensive. There was a large tumor on the right side, extending between the last rib and the crest of the ilium, and most prominent anteriorly in the region of the loin. Almost immediately after the tumor had been manipulated, the patient passed a quantity of thick, offensive urine. It was decided to open the cyst through the abdominal wall, previously inducing adhesion according to the method of Simon, of Heidelberg. Two large silver exploring trocars were introduced at the most prominent part of the tumor, on a line with the anterior border of the axilla, at a distance of five centimetres from each other. Two others were then passed in a transverse direction, midway between the first two, and about two centimetres apart. Offensive pus flowed from all the cannulæ. A small quantity having been allowed to escape, the cannulæ were plugged and left in position. A week later, the tumor had become slightly reduced in size, and upon it a circular area, bounded by the points of puncture, had become somewhat prominent. An incision was then made, extending between the two vertically placed needles and, through the abdominal wall, into the cyst. Considerable offensive pus escaped. On introducing a director, the stone was felt, but, owing to its size and position, could not be grasped or dislodged with the forceps. It was firmly fixed across the pelvis of the kidney. A drainage-tube was left in, and the sac was washed out twice a day. Three weeks later, by means of cutting-forceps, the blades of which could be introduced separately, the stone was divided. It was then possible, by a little manœuvering, to remove the larger portion with the lithotomy-forceps; and afterward the smaller portion, which was imbedded in one of the calices of the kidney, was also extracted. The stone weighed 1·3 oz., and appeared to consist of lithic acid, with a thin coating of phosphates. One month later, the patient died with renal symptoms. The advantages of incision through the abdominal wall, it is claimed, consist in the comparative thinness of the structures covering the tumor in this situation, and in the fact that, the incision being carried directly into the dilated pelvis, the substance of the kidney thereby suffers less damage, and the risk of hæmorrhage is lessened. A large stone imbedded in the calices would also be more easily extracted in this direction.

37. Petersen reports the following case of *pyonephrosis calculosa*, which is chiefly interesting because of the method of operation: A woman, thirty-nine years of age, had suffered with pains in the right hypochondrium for eight years, and for the last two years had noticed a swelling gradually forming in the right side, while the pain became more severe, with occasional attacks of violent colic. The urine was generally thick, though occasionally almost clear. There were constant fever, loss of appetite, and increasing debility. On examination, the abdomen was found protuberant on the right side, was tender to the touch, and appeared to contain a tumor as large as a man's head. There was some deep fluctuation. The needle of a Pravaz's syringe was introduced near the umbilicus, and purulent fluid was withdrawn, which contained fatty-degenerated epithelial cells, crystals of uric acid, and a few blood-corpuscles, together with numerous pus-corpuscles. A cutting operation was deemed unadvisable in the case, for fear that, inasmuch as the patient lived a long distance away, hæmorrhage might occur when assistance could not be obtained. It was decided to evacuate the pus at a point two handbreadths from the spinal column. Pravaz's syringe having been first used in this situation to confirm the diagnosis, this was exchanged for a Dieulafoy's aspirator, and a litre of pus was withdrawn. It was found impossible to fully evacuate the sac, because of the presence of a hard body, which prevented the needle from being introduced further. It was then ascertained that there were two stony concretions in the pelvis of the kidney. The cannula was closed, and left in position for twenty-four hours, when 750 centimetres of fluid were withdrawn. It was then left in for five days longer, to form a permanent fistulous opening, which was afterward gradually dilated with laminaria tents till it would admit the index finger. A lithotrite not being at hand, the stone was crushed by means of polypus (dressing) forceps, and some of the fragments were withdrawn. A second operation was necessary to remove the remaining concretion, which was deeply imbedded in the pelvis of the kidney, and was extracted with some difficulty. The weight of the calculus removed was about 40 grammes. For six weeks drainage-tubes were kept in, with Lister's dressing. In three months the fistula had almost entirely healed. A few weeks after it had closed, the patient, on account of recurring pain, reopened the wound herself, giving escape to a teaspoonful of pus. After this she refused to consent to any attempt to close the opening permanently, fearing a return of pain. At the time of writing, it had remained open a year and a half, and the patient was in good condition.

39. Park makes a division of the *operations for elongated or contracted prepuce* as follows: *Abscision*—usually adopted in infants; the foreskin is drawn forward, and cut off in front of the glans. *Recision*—simple slitting of the prepuce on its dorsal aspect. The term *circumcision* he limits to the operation which consists of recision and the subsequent removal of the angular flaps. *Incision*—practiced when there is neither time nor opportunity to relieve the phymosis in any of the ways above indicated: this is performed by introducing a straight, blunt-pointed knife within the preputial orifice, and incising the mucous membrane to the depth of one eighth of an inch in four places. Ridreau's operation is performed as follows: The prepuce is stretched by drawing the mucous membrane forward and the skin back, so as to lay bare the orifice, into which a slender cylindrico-conoid rod of wood is introduced. A circular incision is then made, about half a line from the mucous margin, dividing the skin only. The latter at once shrinks back behind the glans, while the mucous membrane is retained on the rod. Enough of it is removed, by a circular incision, to give free play to the glans in the aperture left. Finally, unite the edge of the skin and that of the mucous membrane with sutures.

40. Skinner reports an interesting case of *laceration of the urethra*, from a singular accident. A man, thirty-nine years of age, was about having connection with his wife, when, in the act of intromission, he gave his penis a sudden wrench, which caused "something to give way with a sharp crack, like the report of a pop-gun." There was severe pain at first, which soon subsided. On attempting to pass water, he found that none flowed from the meatus, but the whole contents of the bladder escaped into a "swelling" at the point of injury. On examination by the physician, the scrotum was found black and swollen "as large as an infant's head." The penis also was discolored, and was abruptly bent, as if broken, at the peno-scrotal junction, where a deep sulcus could be felt in the right corpus cavernosum. The organ lay upon the left side, and invariably assumed this position upon being straightened. The prepuce was enormously swollen, extending far beyond the glans. An attempt to pass the catheter beyond the seat of injury was unsuccessful. Incisions were made into the swollen tissues. Chill and a condition of collapse followed. After further efforts at catheterization, the physician succeeded in passing a No. 5 gum catheter on a stilette. This was left in, and changed every twenty-four hours. The swelling gradually subsided, but a week later an abscess formed, which again prevented the passage of the instrument, while the extremity of the latter could be felt from the outside moving freely about in the cavity of the abscess. A free opening was then made, giving escape to a quantity of pus, together with some clotted blood. After this it was possible to pass the catheter again, its size being gradually increased up to No. 12. The patient made a gradual recovery, and the fistula healed. It was ascertained that the patient had had gonorrhœa twenty years before, and had noticed that he had been passing his water with increasing difficulty for some time. During erection the penis would be bent in the shape of a bow from above downward. It is surmised by the writer that, when the accident occurred, the urethra, being put on the stretch, was suddenly snapped in two, together with the sheath of the right cavernous body.

◆

Miscellany.

ALUMNI PRIZES.—The Cartwright Prize of the Alumni Association of the College of Physicians and Surgeons, New York, which amounts to $500, will be awarded, subject to the following conditions, for the best essay on some subject in medicine or surgery: 1. The prize is open to the competition only of Alumni of the college. 2. The subject is left to the option of the contributor. 3. The essay must present sufficient original, experimental, or clinical observation to make it a useful contribution to medical knowledge. 4. The essay, designated by a motto, must be sent to a member of the Committee on Prize Essays, accompanied by a sealed envelope, inscribed with the motto and containing the name and address of the author, on or before February 1, 1881. Committee: A. H. Buck, M. D., 109 Madison Avenue; J. E. Janvrin, M. D., 120 Madison Avenue; W. T. Bull, M. D., 33 West Thirty third Street.==== The Alumni Prize, also amounting to $500, will be awarded in 1882, subject to the same conditions.

HYDRATE OF CHLORAL.—Dr. H. H. Kane specially requests members of the profession with any experience whatever in the use of the hydrate of chloral to answer the following questions, and give any information they may possess with reference to the literature of the subject: 1. What is your usual commencing dose? 2. What is the largest amount you have administered at one dose, and the largest amount in twenty-four hours? 3. In what diseases have you used it (by the mouth, rectum, or hypodermatically), and with what results? 4. Have you known it to affect the sight? 5. Have you ever seen cutaneous eruptions produced by it? 6. Have you known it to affect the sexual organs? If so, how? 7. Do you know of any instances where death resulted from or was attributed to its use? If so, please give full particulars as to disease for which given; condition of pulse, pupils, respiration, and *temperature;* manner of death; condition of heart, lungs, and kidneys; general condition, age, temperament, employment, etc. If an autopsy was held, please state the condition there found. 8. Have you seen any peculiar manifestations from chloral—as tetanus, convulsions, or delirium? 9. Do you know of any cases of the chloral-habit? If so, please state the amount used, the disease for which the drug was originally administered, the person's temperament, and the present condition of the patient with reference to the condition of mind and body in general and the various organs and systems in particular. Physicians are earnestly requested to answer the above questions fully, especially 7 and 9, in order that the resulting statistics may be as valuable as possible. All communications will be considered strictly confidential, the writer's name not being used when a request to that effect is made. Address all letters to Dr. H. H. Kane, 191 West 10th Street, New York City.

ARMY INTELLIGENCE.—*Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 14, 1880, to August 13, 1880.*—GODDARD, C. E., Major and Surgeon. Granted leave of absence for four months. S. O. 128, A. G. O., June 11, 1880. ===== GREENLEAF, C. R., Major and Surgeon. Granted leave of absence for four months. S. O. 158, A. G. O., July 20, 1880. ===== KING, WILLIAM H., Captain and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension of three months, on Surgeon's certificate of disability. S. O. 87, Department of Dakota, July 21, 1880. ===== HAVARD, V., Captain and Assistant Surgeon. To proceed to Fort Clark, Texas, and report to the Commanding Officer, First Infantry, for duty with his command. S. O. 158, Department of Texas, August 8, 1880. ===== WINNE, C. K., Captain and Assistant Surgeon. Assigned to temporary duty at Fort Brady, Michigan. S. O. 116, Department of the East, July 12, 1880. ===== PRICE, C. E., Captain and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for two months' extension. S. O. 154, A. G. O., July 15, 1880. ===== COMEGYS, E. T., Captain and Assistant Surgeon. So much of S. O. 135, C. S., from these Headquarters, granting him leave of absence on Surgeon's certificate of disability, is revoked. S. O. 144, Department of Texas, July 19, 1880. ===== GIBSON, R. J., First Lieutenant and Assistant Surgeon. Having reported at these Headquarters, ordered to report to the Commanding Officer, Fort Leavenworth, Kansas, for temporary duty. S. O. 155, Department of the Missouri, July 19, 1880. ===== BENHAM, R. B., First Lieutenant and Assistant Surgeon. Having reported at these Headquarters, is assigned to duty (temporary) at Fort Snelling, Minnesota. S. O. 87, C. S., Department of Dakota. ===== GORGAS, W. C., First Lieutenant and Assistant Surgeon. To report to the Commanding Officer, Fort Clark, Texas, for duty. S. O. 147, Department of Texas, July 23, 1880. ===== STRONG, NORTON, First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Douglas, Utah. S. O. 70, Headquarters, Department of the Platte, July 31, 1880. ===== TAYLOR, A. W., First Lieutenant and Assistant Surgeon. Having reported at these Headquarters, is assigned to temporary duty at Fort Supply, Indian Territory. S. O. 155, C. S., Department of the Missouri.

THE
NEW YORK
MEDICAL JOURNAL.

OCTOBER, 1880.

Original Communications.

ON CLIMATE IN THE PREVENTION AND CURE OF PULMONARY CONSUMPTION, WITH SPECIAL REFERENCE TO THE PENINSULA OF FLORIDA.

By C. J. KENWORTHY, M. D., Jacksonville, Florida,
PRESIDENT OF THE FLORIDA MEDICAL ASSOCIATION, AND OF THE DUVAL COUNTY MEDICAL SOCIETY; LATE SENIOR SURGEON TO THE BALLARAT HOSPITAL, AND PHYSICIAN TO THE BALLARAT BENEVOLENT ASYLUM, BALLARAT, AUSTRALIA.

Recently a professional friend directed my attention to an essay in this "Journal" for September, 1879, entitled "A Plea for Cold Climates in the Treatment of Pulmonary Consumption," by Dr. Talbot Jones, of St. Paul, Minnesota. As the subject of the climatic treatment of phthisis is all-important, I shall offer no apology for referring to some of the statements and data of Dr. Jones. In opposition to his views and opinions, we find that a majority of the leading minds in the profession advocate a dry, bracing, and temperate climate for the treatment of a large proportion of the cases of pulmonary disease. The views of Dr. Jones are not new, but can be found in Copland's "Medical Dictionary," article "Pulmonary Consumption," and many of the data so much relied on by him have probably been obtained from that work. It is to be regretted that he did not quote from later authors.

It is possible that the views of professional men may change, as they have changed, regarding moist and sedative climates. In the language of Dr. J. H. Bennett, "I look upon the recent movement, which tends to send consumptives and chronic chest diseases generally to cold and elevated regions for the winter, as a mere reaction from the therapeutical doctrines of our forefathers. Now that medical doctrines have changed, that vitalistic and sthenic views of treatment prevail, and are found to give infinitely more satisfactory results than those that followed antiphlogistic treatment, the medical mind in America and Europe looks about for a colder climate. As usual, the pendulum has a tendency to pass to the other extreme; to go from Madeira, Jamaica, and Barbadoes, from Havana, Florida, and Nassau, to the ice-covered summits of the Swiss mountains, to the frozen plains of northern America. Many minds can never constitutionally accept and follow the golden adage, '*medio tutissimus ibis*'; they can not remain in the middle of the road; they must pass from one extreme to the other." *

At p. 274, Dr. Jones states: "From an extensive series of data it has been lately shown that, the farther we progress north, the greater immunity the inhabitants enjoy from consumption. In the bleakest and most exposed portions of the globe, where winter wellnigh exists continuously, and where sudden and severe changes hold at a maximum, consumption is very infrequent. Indeed, so true is this that we are forced to the conclusion that extreme cold is inimical to the production of consumption."

Dr. Jones states that "it has been lately shown," etc., but he does not quote a recent authority in proof of his statement. To sustain his position, he refers to the infrequency of this disease in Iceland, Sweden, Norway, and certain cities in Russia. From my knowledge of medical literature, I am forced to the conclusion that the writer has not consulted some of the later and more authoritative writers on this subject.

---

* "Pulmonary Consumption." By J. H. BENNETT, M. D. Third edition, pp. 75, 76.

Iceland appears to be exceptionally free from phthisis; but the cause can not be the coldness of the climate, for in northern Russia, with almost the same climate, the disease is very prevalent. Dr. Brehmer, who has written on this subject, attributes the infrequency of the disease to the constant use of fish oil as an article of diet. The eminent climatologist Dr. Lombard * states that the mortality from phthisis in the northern towns of Sweden is 147 in 1,000; in those of the center, 125; and in those of the south, 131. Norway presents the same high mortality, 130 in the 1,000. In Denmark the general mortality from phthisis is 122 in 1,000, nearly the same as in London, where it is 121; lower than in Glasgow, where it is 158. "In Russia, from 1857 to 1859, the general mortality from phthisis was 164 in 1,000; in the most northern province, Archangel, the mortality was very high, 190 in 1,000; in the adjoining one, west, of Wologda, still higher, 204 in 1,000. † If we accept the statements of such acknowledged authorities as Lombard and Bennett, phthisis is very prevalent in cold climates, and Dr. Jones's position rests upon a very slender foundation. Professor Ruehle, of Bonn, says: "The investigations of Hirsch have shown that neither the geographical position nor the temperature of a region have [*sic*] anything to do with the prevalence of consumption. . . . While it is very rare . . . . in the interior of southern Africa, it is, on the other hand, very common in Sweden . . . . and in Siberia." ‡ We are not justified in basing a general law on the isolated fact that phthisis is very infrequent in Iceland. According to Dr. Livingstone, phthisis is almost unknown in the southern portion of Africa, but this fact can not be used to prove that the disease is not prevalent in other warm climates. Many portions of the interior of Africa are elevated, and this fact has been overlooked by the advocates of high altitudes in the cure of consumption. Dr. Rush remarks ("Medical Inquiries," vol. i, p. 37) that pulmonary consumption is unknown among the Indians of North America. As the Indians inhabited every State and Territory, this fact could be used to prove that high or low altitudes, or warm or cold climates, were favorable for the cure or prevention of this disease. In the language of Dr. Copland, "As to the climate of different countries, and as to the influence of situation and locality either in favoring or preventing the prevalence of phthisis, our knowledge is altogether imperfect. Much that has been asserted on this subject is more or less inaccurate, the inaccuracy being often in proportion to the dogmatism with which the matter is treated."

---

* "Traité de Climatologie," vol. ii, p. 110.

† BENNETT, "On Consumption," 3d edition, p. 116.

‡ VON ZIEMSSEN'S "Cyclopædia," vol. v, p. 490.

In forming an opinion of the adaptability of any climate for the treatment of this disease, we should not resort to hasty generalization, but carefully and impartially consider climatic factors; the frequency or infrequency of the disease among residents; ascertain from reliable evidence the effects of the climate upon invalids who have become permanent residents; obtain the views of resident physicians of experience and intelligence. In estimating the advantages and disadvantages of any climate or altitude, writers often overlook the influence of food, the immunity from phthisis in some races, its prevalence in the Caucasian race and in the crosses of this race with the negro, the *effects of syphilis* in its production in the colored race, the length of time a place has been settled, the crowding of persons in towns and villages, dampness of soil, prevailing winds, habits and occupations, and numerous other factors in the causation of consumption.

At p. 275, Dr. Jones refers to the Report of Colonel Tulloch to the British War Office, and states that in "Nova Scotia, where the winter temperature is very low, consumption is less frequent than in Jamaica." This statement is correct, if we include colored troops, but these can not be called British troops. Dr. G. T. Balfour compiled statistical tables, from the Reports of the British War Office, with reference to the admissions and deaths from phthisis among British troops (not native) per 1,000, with the following results, at a few stations:

NOVA SCOTIA.		JAMAICA.		GREAT BRITAIN.		MADRAS.		BOMBAY.	
Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
14	2·29	5	1·96	19	3·48	16	1·88	9	1·53

Dr. Jones maintains that the disease is more frequent in warm than in cold climates, but all writers do not agree with him. We have referred to the infrequency of the disease in Africa, and shall cite other localities. According to Dr. Hancock, phthisis is almost unknown in British Guiana. Every advocate for high altitudes cites the interior of South America as evidence of the infrequency of phthisis at such altitudes, yet this is a warm climate. Dr. Copland remarks that "in countries in which the isothermal lines of annual temperature range from 75° to 85° F. phthisis appears to be rare among the aborigines. In Upper Egypt and other points of northern Africa, and in those places in western Asia where the annual range of temperature is not much above 70°, or below 65°, this disease is very infrequent. The immunity of these countries, more particularly of Egypt, from consumption was well known to the ancients from the days of Aristotle, and hence this country was recommended by them as a place of residence for consumptive patients."

It is stated by Chardin, Fryer, Kaye, and Kerns that consumption is seldom seen in Syria and Persia. MM. Broussais and Boudet state that phthisis is rare in the natives of Algiers and the Barbary coast, the mean annual temperature varying from 68° to 72°. M. Broussais observes that the mortality from this disease in the French army was 1 in 102, and in France 1 in 5.* In Jacksonville the mortality from phthisis is very low among residents. We might plausibly use these facts to prove that the mortality from phthisis was low in warm climates; and that, as a consequence, Florida must be adapted to the alleviation and cure of pulmonary diseases.

---

* See COPLAND'S "Dictionary of Medicine."

But we believe in the homely adage, "every tub should stand on its own bottom." Each State or climatic resort should be discussed and judged independently of others. One State, or even a portion of a State, may possess climatic factors entirely distinct from those of adjoining ones, and, in consequence, climates can not be judged by zones. Data which will apply to Charleston, South Carolina, will not illustrate the climate of Aiken, in the same State. The mean relative humidity of Breckenridge, Minnesota, is 79·6, while that of St. Paul is but 71·3 for the cold months. Hence we can not judge of the dryness of the latter by data applicable to the former. The mean relative humidity of Key West, Florida, for the five cold months, is 76·8, and in Jacksonville, for the same period, but 68·8. The mean temperature of Key West, for five years, for the five cold months, is 72.2°; and of Jacksonville, 58.7°. It would be unjust to judge one of these places by the other.

At p. 275, Dr. Jones quotes Dr. Forry to prove that "consumption, as it affects the American army," is more frequent in the South than in the North; but neglects to quote the following words used by Dr. Forry ("Climate of the United States," p. 236): "The conclusion that pulmonic lesions, as regards the annual ratio, are more prevalent in *certain systems* of climate in southern than in northern climates." The word "*systems*" is not referred to by Dr. Jones, and it does not mean the South taken collectively. "Pulmonic lesions" mean something more than consumption. In commenting on Dr. Forry's views regarding the frequency of "pulmonic lesions" in the South, Professor Charles A. Lee says: "Dr. Forry's remarks, however, apply more particularly to bronchial affections than to tubercular disease."

When Dr. Forry wrote, the Northwest was a wilderness, and troops were not subjected to the same influences and causes of disease as they are to-day, and his deductions do not apply to the present. Writers cite the infrequency of phthisis in the newly settled States and Territories, but do not refer to the facts that pioneers are generally robust and almost exempt from this disease, and that this affection is an "in-door disease." At one time, among the hardy immigrants of

Australia this disease was almost unknown; but it has become prevalent among persons born there.

To test the applicability of Dr. Jones's views to the United States, we shall introduce a few figures. The climatic distribution of pulmonary diseases is illustrated by the following table from Blodgett's "Climatology," a work of undoubted authority:

	Deaths by phthisis.	Per cent. of entire mortality.	Deaths by diseases of respiratory organs.	Per cent. of entire mortality.
Maine	1,702	22·4	2,074	27·35
New Hampshire	924	21·84	1,092	25·82
Vermont	751	24·09	884	28·24
Massachusetts	3,426	17·65	4,418	22·77
Connecticut	968	16·75	1,280	22·31
Rhode Island	470	20·92	572	25·52
New York	7,890	17·04	10,846	23·42
New Jersey	915	14·15	1,176	18·19
Pennsylvania	3,520	12·33	4,821	16·80
Delaware	118	9·76	185	15·30
Maryland	1,101	11·44	1,679	17·34
Virginia	1,616	8·48	3,540	18·56
North Carolina	562	5·83	1,688	16·60
South Carolina	269	3·84	1,343	16·69
Georgia	279	2·80	1,334	13·44
Florida	43	4·61	108	11·60

But these figures do not properly represent the mortality from pulmonary disease originating in Florida, for they do not indicate the number of deaths occurring among invalids who came to the State in the last stages of the disease. "From the United States census tables and other statistics the fact is developed that phthisis in the United States progressively diminishes from Maine to Florida. Dr. Lawson, Surgeon-General of the United States Army, sets down the mortality from tubercular consumption as three times greater in the Northern than in the Southern States." * To illustrate the frequency of phthisis in the United States Army, at a few stations, from 1840 to 1859 inclusive, I will quote the following:

Coast of New England	4·6
Harbor of New York	5·6
Great Lakes	4·5
Middle Interior, West	8·7

---

* AITKEN, "Practice of Medicine," vol. ii, p. 788.

South Atlantic	7·9
South Interior, East	6·9
California, Southern	4·9
California, Northern	5·4
Atlantic Coast of Florida	2·7

Dr. Brinton, in his work (p. 128), gives a table showing the relative frequency of pulmonary diseases at a few points. "One man came under the surgeon's care for one or other of these diseases:

"In Arkansas	one in 16
In Texas, northern frontier	" " 16
In Baton Rouge, Louisiana	" " 17
In St. Paul, Minnesota	" " 19
In Florida, eastern coast	" " 37"

At p. 277, Dr. Jones says: "Consumption is relatively as common in our Southern health-resorts as it is in corresponding warm countries in Europe. Florida, which has been so vaunted as a sanitarium for invalids, shows a greater mortality to-day than Minnesota." The only data published regarding the mortality of the State are the Army Medical Reports, the census statistics, and the mortuary returns of this city; and they are favorable, and negative the statements of the writer. To have rendered this statement authoritative, the Doctor should have published data. A writer in the "American Cyclopædia," vol. vii, p. 281, says: "Of the total number of deaths from all causes in Florida in 1870, as reported in the Federal census, only 131 were from consumption. There were 17·3 deaths from all causes to one from consumption. The advantages of the climate are further shown by a comparison of the statistics relating to consumption, as reported in the census of 1870, from which it appears that the ratio of deaths from consumption to those from all causes was less in Florida than in any State except Nevada; and this advantage becomes still greater when it is considered that, Florida being a popular resort for consumptives, *a large proportion of those who die there from that cause* came with the disease from other States." When the census returns of 1880 are published, it will be time to discuss the relative mortality of Florida and Minnesota "to-day." With the exception of this city, there is no registration of deaths in this State, and I can not divine where the writer obtained his statistical evidence upon which to base a comparative statement regarding the mortality of Minnesota and Florida.

On p. 277, in connection with the statement regarding the mortality of Florida, Dr. Jones quotes Dr. Pollock as follows: "In the West India Islands the disease is met with in its most severe and rapid forms." Florida is not one of the West Indies; the climate is different; the mortality from phthisis is probably less than in those islands; and we can not account for this reference, unless it was intended to produce an unfavorable impression regarding this State.

On the same page the writer refers to the "high rate of mortality in humid Southern climates," and remarks: "Take, for example, Florida, which is perhaps to-day more frequented by invalids than any Southern place of resort. The *exceeding fatality* of consumption to families who for generations have resided in this State, as well as the unfavorable effects, as a rule, observed upon patients who visit it in declining health, is well known. We are not surprised that such is the case after having carefully analyzed the climate, for really there is little that can be said in its favor, and much that must be said against it."

If Dr. Jones's statements can be established, invalids should shun Florida as they would the deadly upas-tree or the marshes of the Campagna; if they can not, justice to invalids and to this State demand that they should be contradicted. In making such a sweeping statement, in which the welfare and progress of a State are involved, and where health, if not life, is at stake, it would have been but just for the writer to furnish statistical data, or references to authors, to resident physicians, or to the results of personal investigation. Dr. Jones informs us that he has "analyzed the climate," but does not describe the *modus operandi*, or give definite evidence of the results. In this age of investigation, an individual opinion regarding an entire State is of but little value unless supported by positive and reliable data, and by years of experience, observation, and investigation. Dr. Jones's unfavorable references to this State are frequent and pointed, but his assertions are unsupported by statistical evidence, nor are they based on personal observation or experience, or on data furnished by those most competent to form opinions of climate, and its effects on invalids—resident physicians of experience.

In reply to Dr. Jones's statements, I assert that the peninsula of Florida does not possess a humid climate. For the five cold months, the period which interests invalids, its mean relative humidity is *less than that of Minnesota*. My observations have led me to adopt views opposite to those of Dr. Jones, but, as they are merely the views of an individual, they are perhaps unreliable. To determine the question of the transmissibility of consumption and other points in connection with this disease in Florida, I addressed a circular letter to leading physicians in various portions of the State, and will quote a few of the queries propounded and the answers received:

Query.—How long have you practiced medicine in this State? *Answers.*—28, 22, 23, 24, 25, 12, 7, 30, 36, 28, 21, 30, 21, 42, 5, 49, 30 years.

Query.—Have you noticed any tendency to the hereditary transmission of phthisis in families that have resided for generations in this State? *Answers.*—"None." "None of a marked character." "Hardly an instance—so seldom as to make it an exception." "No." "No." "None." "In one family, for three generations, members died of phthisis; the present members of the family are quite healthy, and I am convinced the hereditary tendency is removed." "In one instance only." "Not more so than in other States." "I have no recollection of any case." "Seldom developed, and, when it does occur, milder and more favorable than in the Northern and Western States." "In some rare instances." "Not more so than in other families." "Hereditary transmission dies out." "Know families here, born of consumptive parents, who have passed the meridian of life, and exhibit no sign of pulmonary disease."

To still further determine the transmissibility of consumption in this State, I propounded the following queries:

Query.—Do you know persons who are residents of this State, who came here suffering from phthisis, who have had children since they became residents? *Answers.*—"Yes." "I do." "More than a dozen." "Several." "Several." "Yes." "Yes." "I do." "Yes." "A number." "Yes." "Quite a number." "There are many, to my knowledge." "Yes."

Query.—Have you noticed any tendency among children of such parents to manifest any hereditary tendency to phthisis? *Answers.*—"No." "Not in any case." "No." "None." "None." "No." "No." "No." "I have not; their children are as healthy as any I have seen in any part of this country." "In two instances only." "No; children of such parents are healthy." "No; have noticed no such tendency in such children." "No." "None."

In these replies we have the positive statements of educated, experienced, and trustworthy medical gentlemen—physicians competent to form unbiased and intelligent opinions, and whose aggregate experience amounts to over four hundred and thirty-three years, or an average of over twenty-five years. I am personally acquainted with most of them, and I can vouch for their integrity. As they reside in different portions of the State, they could not compare views; and, as a consequence, their opinions are the more valuable.

Dr. Jones refers to the "unfavorable effects, as a rule, observed upon patients who visit Florida in declining health." As his paper is devoted to the consideration of the climatic treatment of consumption, we must conclude that by "declining health" he means this disease. If the opinion of Dr. Jones is correct, it is surprising that so many invalids visit this State, and that the number increases annually; and, what is still more surprising, many pulmonary invalids settle in the State and are restored to health. In my visits to various portions of the State, I have met numbers who settled here as invalids, and they could not be induced to leave. Like Dr. Jones, I have carefully "analyzed the climate of Florida," but am not disposed to hazard a positive opinion based on personal investigation and study. Hence, I shall again quote queries from my circular letter, and give the replies received.

Query.—Is tubercular consumption as liable to be developed here as in the Northern and Northwestern States, in persons predisposed to the disease? *Answers.*—"No, sir." "No." "It is not." "From my experience North and South, I unhesitatingly say no." "No." "No." "I think not." "I have not seen an instance in which it was developed in a person predisposed to it." "It is not." "No." "There are very few cases developed in this climate in the predisposed." "No." "Such has not been my experience." "It certainly is not." "No." "It rarely occurs." "No."

Query.—Does the climate of Florida favor the cure of phthisis developed elsewhere? *Answers.*—"Most certainly." "It certainly does; and, more especially, in those whose lungs are softened and cavities exist." "It does, as I know from observation." "In my experience, decidedly yes." "In most cases." "If persons avail themselves of the climate sufficiently early." "Yes." "It does." "I have known many cases cured by coming to this climate." "It does." "I have known many cases cured, and others relieved, and life prolonged to old age." "I have known many cases cured by coming to this climate." "Yes." "It certainly does." "It does; I have known many cases." "Yes; advanced cases are often cured by this climate." "It does." "Yes."

Query.—Do you know persons, now living in this State or elsewhere, who came here suffering from phthisis, either incipient or developed, who have been benefited by a residence here? *Answers.*—"Yes; many of them." "I do." "A great number." "Quite a number whom I can name." "Several." "Yes." "Yes." "I do." "I have seen many benefited during my residence here, and I know quite a number now living here, who have been cured by a residence in this State." "Yes." "Yes; several instances." "Numbers of cases." "I have known many persons who have been restored to health, and many whose health has been improved." "I know many such." "Yes; I can mention several."

Query.—Do you consider the climate of this State favorable to the treatment and cure of pulmonary diseases? *Answers.*—"In my opinion, it is the finest climate in the world for pulmonary diseases." "I have seen so many benefited that I can recommend it in almost every case." "I do, above any other that can be found on the American continent." "Decidedly." "More so than in any State in which I have lived." "Yes." "All are not benefited; many certainly will be." "I certainly do." "I consider it the most favorable climate on the globe for the relief or cure of phthisis." "Superior to any in the United States." "I consider it the most favorable climate on the globe." "Superior to any in the United States." "Yes, most positively." "Yes." "Most certainly. Have known numerous cases fully restored here, that have returned North and done well." "I do." "I do, decidedly." "I do."

The gentlemen who replied to my queries are not residents of sanitaria, and have no personal ends to attain. They had no reason to believe that I would publish their names; and they could have no sinister motive in misrepresenting the climate of the State. The opinion of one intelligent and respectable physician deserves consideration; but, when we are favored with the united evidence of seventeen, their testimony is valuable, if not convincing. Not one of the replies received is adverse to the climate of this State. Such testimony must be received as trustworthy, or these gentlemen must be accused of misrepresentation. If the evidence given is reliable, much can be "said in favor of Florida" as a climatic resort for invalids.

Dr. Jones asserts that "much can be said against Florida." This is a vague statement, and unsupported by testimony or reliable data. The inquirer after truth has a right to require that scientific doctrines which he is asked and expected to receive as true shall be supported by observation, experience, or statistics. I do not accuse Dr. Jones of intentionally misrepresenting this State; but I believe that he has been misled by persons incompetent to form correct opinions. Scientific progress is advanced by the temperate, but free and open, discussion of questions upon which different observers may have been led to entertain the most diverse and conflicting opinions. The very essence of science rests upon the repeated testing of conclusions already arrived at; and by this course alone can errors be corrected. Every real student of science will encourage discussion in every way in his power, for he must know that it is almost impossible that the truth as to many complex problems can be arrived at without long and patient examination. Pulmonary diseases are very prevalent and fatal; and, as their climatic treatment is commanding much and deserved attention, this or that State or sanitarium should not be condemned without sufficient evidence.

The climate of Florida is not perfect, for a model climate does not exist. From my experience in many lands and climes, and in hospital and private practice, and from my investigation, observation, and study of the climate of this State, and its effects on invalids, I deem it, at least during the cold months, eminently adapted to the treatment and cure of pulmonary affections. The temperature is favorable; the mean relative humidity is all that is required; the air is salubrious, and in a large portion of the State dry and bracing. Atmospheric changes are infrequent; rains and cloudy weather are the exception, and sunshine the rule. The State possesses insular, interior, dry and bracing, and somewhat moist localities; tropical, semi-tropical, and cooler sections; level, rolling, and hilly lands. If the nature of any case should demand a change of climate, a suitable one can be easily and cheaply reached, owing to the comforts and facilities for traveling.

Dr. Jones quotes Dr. Forry as an authority, and this accomplished climatologist wrote, from a long residence in Florida, while attached to the U. S. Army: "When the period of the red man's departure shall have passed, the climate of this land of flowers will acquire a celebrity as a winter residence not inferior to that of Italy or southern France." Dr. Lee, editor of Copland's "Dictionary of Medicine," vol. iii, p. 1235, says: "Dr. Forry and other writers of authority recommend a change of climate in this disease [phthisis] as a remedial agent of great efficacy, and especially the peninsula of Florida." In discussing the most suitable climates for invalids, Dr. Wilson, late Medical Inspector of Camps and Hospitals, U. S. Army, remarks: "Neither upon the southern coast of France, nor anywhere under the bright Italian skies, can a winter climate be found so equable and so genial to the delicate nerves of most invalids as can be enjoyed in our sanitary stations in Florida." *

* "Health and Health Resorts," J. WILSON, M. D. Philadelphia, 1880. P. 26.

Over half a century since, we find that a favorable opinion was entertained with regard to the climate of this State. Charles Vignoles, who explored the State (Vignoles's "Florida," New York, 1823, p. 111), states: "That the climate is good for patients of a consumptive habit is notorious; several persons, during the last winter and spring, from Carolina and elsewhere, having recovered their health. The attention of the faculty is seriously entreated by the author to this subject, and to the propriety of their ordering their debilitated patients to try the salubrious air of Florida."

If Dr. Jones had instituted inquiries in his own State, he would have found persons who would say something "in favor" of Florida. I shall cite but two cases. Thirty years ago, Bishop W., of Minnesota, was attacked with phthisis, and went to St. Augustine, where his health improved; and for the last ten winters he has visited this State. The daughter of General A., of St. Paul, visited this city as a pulmonary invalid, and since that time has spent five winters and one summer here, and from what I can ascertain her health is restored.

My first visit to this State was in 1844, and as a visitor, after that date, I became familiar with the climate and its effects upon invalids. I resided near New York, and my wife became the victim of phthisis. The disease reached the second stage, and she had emaciation, night-sweats, copious expectoration, and frequent and severe hæmorrhages. Deeming a change of climate absolutely necessary, I settled in this city. From the hour of my wife's arrival in the State, improvement was great. After a permanent residence of nearly six years, she is in the enjoyment of perfect health, and weighs 143 lbs.

At p. 278, Dr. Jones refers to the effects of a "hot, humid atmosphere" upon the skin, and remarks that, "A certain amount of exercise is a *sine quâ non* to the successful treatment of a patient with phthisis. Florida would be unfit for a person to visit for this reason, if for no other. Here everything invites to repose; an irresistible feeling of languor seizes a person; one's energies are paralyzed, and exercise consequently neglected." The writer never visited the State, and how can he so lucidly and positively describe the effects of its climate? If he had personally "analyzed the climate of the State," he would have discovered that it is not "hot and humid" during the winter months and not so relaxing and depressing during the summer months as that of many of the States east of the Mississippi. With regard to the temperature of the peninsula, we find the mean for the cold months to be as follows:

STATIONS.	Number of years.	November.	December.	January.	February.	March.	Mean for 5 years.
Key West..............	5	74·5°	70·5°	70·5°	71·7°	78·8°	72·2°
Punta Rassa.............	5	69·7°	68·4°	65·5°	65·9°	69·8°	67·1°
Jacksonville	5	62·1°	55·8°	56·2°	56·9°	62·7°	58·7°

From the preceding table it will be seen that peninsular Florida possesses a variety of climates. If a warm one is demanded for the treatment of any given case, it is available; if a dry, bracing, and temperate locality is indicated, it can be found in Jacksonville and northern Florida; if a medium climate is preferred, it can be secured on the southwest coast. Instead of the climate of the northern portion of the State being "hot" during five months of the year, it is a close approach to the ideal climate so highly recommended by leading writers on pulmonary diseases.

Dr. Jones has evidently been misinformed regarding the factors of this climate and its effects upon invalids. I opine that if he would spend a winter in this State, study the effects of its climate upon consumptive patients, and daily and hourly see them riding, driving, rowing, sailing, botanizing, playing croquet, and taking other active exercise, he would not include in his next essay the statements quoted. We have referred to the cold months, which mainly interest invalids, but have no hesitation in asserting that his statements do not even apply to the summer months. In summer, persons do not suffer from heat as they do in many portions of the North. At times, in northern Florida, the thermometer rises as high as it does in the North and West, but when a high thermal range exists there is a very low relative humidity, with a refreshing breeze.

Within the last two years the thermometer has ranged very high in this city—reaching 95° and above on ten occasions To illustrate the fact that when the air is "hot" it is not "humid," I applied to the observer in charge of this station, and he kindly furnished me with the following data. During the summer of 1879 and this summer, the thermometer marked 95° and above on ten days; during the hottest portion of the day the mean relative humidity was but 41·7, and for the entire twenty-four hours 55·1. Suffering from heat and sunstroke are to a great extent dependent upon the humidity of the air, and thus far a severe case of sunstroke has not occurred in this State. Even though the thermometer rises to 90° or above, the atmosphere is dry and bracing, and a refreshing sea-breeze is present. The nights are always cool, refreshing, and invigorating, and, instead of the invalid or the exhausted laboring man sweltering in his bed, as in the North, he enjoys a full night's refreshing sleep, and awakes in the morning invigorated.

(To be concluded.)

ON PROLAPSUS ANI.*

By W. H. VAN BUREN, M. D., LL. D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY, DISEASES OF THE GENITO-URINARY SYSTEM, AND CLINICAL SURGERY, IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Concluded from September Number.)

TREATMENT.—We must now proceed to the general subject of treatment, which is to be considered under the two heads of *palliation* and *radical cure.*

By keeping in mind what I have pointed out concerning the pathological anatomy of prolapse and the mechanism resulting in its production, which involves the same factors in all its varieties, you can not fail to treat this distressing disease with a good prospect of success. By way of preface, let me remark that in all cases the *cause* of the prolapse is to be made out at once, and as fully as possible, for it may be keeping up the disease by its persistence, and, if removable, a cure may be accomplished without further delay. Thus, the removal of a stone from the bladder may be the remedy required; or some injections of lime-water, or infusion of quassia, to get rid of ascarides, which are provoking habitual straining; or the detection and tying off of a polypus.*

---

* Extracted from Professor VAN BUREN's forthcoming work on "Diseases of the Rectum." New York: D. Appleton & Co.

A prolapse partakes more or less of the nature of a rupture, or hernia, and the surgeon's skill is often first called for to put back a protrusion from the anus which has probably taken place suddenly, in an excitable child, while straining at stool. In such a case the mother or nurse intuitively places the sufferer across her knees, and by judicious manipulation in the way of pressure by the fingers, aided by a greased rag, will gently force back the protrusion until it retires entirely within the sphincter. You can not improve upon this manœuvre, which is the best for the purpose; but where the protrusion has become strangulated by the excited sphincter, perhaps livid and œdematous, it may fail, and you naturally hesitate to renew the child's suffering without certainty of success. Here your proper course would be to give enough chloroform to relax the sphincter and quiet the involuntary forcing and tenesmus that are often present, and then, by repeating the manœuvre first described, you will probably succeed at the first effort.

I was once called to the assistance of an old gentleman who had a sudden descent of the rectum happen to him while foolishly straining in the water-closet. He had never had anything of the kind before, and did not know the nature of the accident which had befallen him. I experienced some little difficulty in effecting the reduction of the protruded bowel through the spasmodically contracted sphincter. After he had breathed some ether, I found no further resistance. But after the bowel has been "down" frequently, unless it has undergone a sudden increase of bulk, there is less difficulty in reducing the protrusion than in keeping it up after reduction.†

---

* Under this head (polypus) a number of instances are noted in which prolapse was present as a complication of the disease, and its cure was effected by removal of the tumor.

† HAMILTON, of Dublin, relates the following graphic case: "About a month ago I was called to see an old man, in the Liberties, said to have been given up

As in reducing a dislocation, or a hernia, when there is difficulty, the use of an anæsthetic is the patient's right as well as the surgeon's duty, for harm sometimes follows prolonged bruising of the parts, as in the following case reported by Cruveilhier: An old man entered Hôtel Dieu with an enormous prolapse, which was reduced only after repeated efforts. He shortly afterward had a chill, and died in a few days, with abscesses in the liver, from pyæmia.

Incision of the sphincter to facilitate difficult reduction, although suggested by respectable authorities, will be rendered unnecessary, except perhaps in a case of exceptional difficulty, by anæsthetics. This measure has the great disadvantage of damaging the fibers of a muscle, the healthy contractility of which is the best safeguard against reproduction of the prolapse.*

But it happens, as a rule, that after a prolapse has been reduced it will come down again very readily; sometimes, indeed, on the slightest exertion, and pretty certainly, unless means are employed to prevent it, at the next stool. The most effective resource in the way of palliation of this tendency to re-descent is *pressure* applied locally over the anus. This is best managed by fitting a wad of oakum, or, in its absence, a piece of soft sponge, upon the anus as a compress; and, to keep the compress in place, press the buttocks forcibly together and retain them in position by a sufficiently broad strip of

---

by his medical attendant, which I found, on waiting on that gentleman, to be true. I certainly found the old man very ill, in great torture, with a feeble, intermittent pulse, a dry, brown tongue, a large, hard prolapsus which had been down several days, and which was extensively ulcerated; he had also retention of urine. Attempts had been made to reduce the prolapsus, but they had failed; no sooner was it put up than it protruded again immediately. I first drew off the water. I then, after having oiled my fingers, reduced the prolapsus, pushing it up beyond the internal sphincter, but as soon as the fingers were withdrawn the whole mass again came out; this happened a second time. I therefore got a moderate-sized tallow candle, cut it in half, rounded the end, and, after having again reduced the prolapsus, before it came down I introduced the candle. It effectually kept the bowel up, and he ultimately recovered."—("Dublin Hosp. Gaz.," December 15, 1845, p. 131.)

* Duchaussoy, whose paper on falling of the rectum in children (in "Arch. Gén. de Méd.," 1853, p. 320) contains the experience of Guersant at the Children's Hospital of Paris, and has been much quoted, maintains that relaxation or want of tone in the external sphincter is the principal cause of prolapse.

adhesive plaster, applied transversely across the nates.* This will effectually keep the tampon in place, and it is the most convenient alternative for the horizontal position, which is equally sure, but not always possible. If the skin is rendered hard by the frequent application of spirits to prevent soreness from traction of the plaster, this device will prove more useful than any of the mechanical contrivances generally recommended. Of these latter, the best has a spindle-shaped hollow compress of caoutchouc tubing to fit over the anus, and this is kept in place by a vertical arm of wire, connected with a circular band around the hips. I can not recommend any of them, because the treatment for radical cure, unless the case is a very old and desperate one, is usually so safe and effectual.

Having accomplished immediate palliation by pressure, there are many remedies which are generally considered to hold out a promise of more permanent cure. These measures, it must be said, however, often constitute a sort of routine treatment, more or less approved by medical men, which, although often ineffective, is hopefully persevered in by patients, and in many cases unwisely, through groundless fear of a surgical operation.

Where, in an adult, there is any suspicion of the presence of hæmorrhoidal tumors, or if there is any habitual loss of blood, however slight, it is very injudicious to defer an examination under ether, when you can safely cure the piles, if present, by simple means, and by the same or similar means you could also at the same time effectually remedy the prolapse.

With tonics, such as iron, and vegetable bitters, especially strychnia, which Nélaton thought had power to tighten the sphincter, or calomel and rhubarb, with injections of tinctura ferri chlorid., and infusion of calumba—Brodie's favorite prescriptions for children—the use of an enema before every stool, to soften solid fæces and prevent effort in defecation, is undoubtedly a most effectual measure in preventing the descent of the bowel. The injection should be cool, not cold, and, to answer its purpose, it should be moderately copious. After the stool, and after the reduction of the prolapse (if it comes down), a smaller quantity of fluid—say ℥ij to ℥iv—may be thrown into the bowel, as cold as can be borne, for the purpose of constringing the overstretched parts and restoring their contractility. This injection may consist of simple water, or some unirritating astringent—solution of the sulphate of iron (gr. i–iij to ℥j), or of the subsulphate—infusion of krameria, decoction of white-oak bark, of witch-hazel, root or leaves; or a suppository, as of tannic acid, may be inserted before the compress is reapplied.

---

* Hake, "Lond. Med. Gaz.," February, 1847, p. 320.

When a stool is passed in the horizontal position, a prolapse will very rarely come down; so that by the aid of a folded diaper, or a thin-edged bed-pan beneath the buttocks, and assisting the act by an enema of tepid milk and water, if necessary, for two or three weeks, a cure, in a recent case, and in a child, may be pretty certainly effected. It has been found, also, that a mother can prevent the descent of a prolapse if she drags the anus of the child a little to one side as the stool is passing, by pulling upon one of the buttocks with the hand.* The same advantage might be attained by applying a strip of fresh sticking-plaster so as to secure the same deviation of the anal orifice from the median line. Similar safety from protrusion may be secured if the patient can be made to defecate in the erect, or nearly erect, attitude.

I was told by a Southern gentleman, who brought his daughter to me several years ago, with a large prolapse of some duration, at the age of five, that the child had the disease in her second year, and had been entirely cured by her negro nurse, who forced her to evacuate her bowels always in the *standing* position, placing her in a cold bath immediately after the motion. It had returned, however, the year before his visit, during a severe attack of dysentery, and still persisted. She got well entirely and permanently under the treatment I have recommended, which, in children, I think you will find efficient in all cases but those in which the protrusion is of large size and long standing, or kept up by some cause which has not been removed.†

---

* Dr. H. McCormac, in "Dublin Jour. of Med. Sciences," July, 1843, p. 416.

† M. Ferrand ("Gaz. Hebdom.," January 2, 1880), according to his statement, cured a lady of thirty-five of hæmorrhoidal prolapse of the size of the fist, which

Where there is no such influence to interfere with a favorable result, even the worst cases of complete prolapse are curable by a surgical operation.

A surgical operation is proper in all cases of prolapse to which palliative treatment is not applicable, and in those which it has failed to cure. The form of operation demanded (except where irreducible invagination is present) is a proceeding which I can especially recommend to you on account of its simplicity and success. Its object is twofold; first, to get up adhesion between the membrane lining the anus and lower portion of the rectum with the underlying muscular layer, and thus to prevent this loosely attached mucous coat from slipping through the anus, for this, in the common form of prolapse, is the first step—the initial lesion; and, second, to stimulate the function of the sphincter, and otherwise to narrow the orifice of the anus itself. You recognize, at once, the necessity for attaining this double purpose; the mucous membrane has been dragged away from its attachments, and the laxity and elongation of its underlying connective tissue, which constantly tend to increase, must be corrected; and, moreover, the stretching of the anus by the habitual descent of a prolapse of any size always gives rise to permanent relaxation of the sphincter, and, sooner or later, to wasting of its muscular substance, which necessarily weakens, and, in time, destroys its important function. I have known a timorous patient with prolapse (from piles, be it understood) submit for months to electrical stimulation of that important sentinel, the sphincter ani, in the hope of getting rid of the constantly recurring protrusion and of escaping an operation;

kept continually coming down, by subcutaneous injections of ergotin into the ischio-rectal fossa. He threw in about twenty minims of a solution consisting of fifteen parts each of glycerine and water, and two parts of alkaline hydrated extract of ergot. Four injections in all were used in the course of a month.

M. Vidal, of the St. Louis Hospital, of Paris ("Le Progrès Médical"), reports that he has cured three cases of prolapsed anus in adults, by injecting fifteen to twenty drops of a solution of one gramme of extract of ergot in five grammes of cherry-laurel water, causing no abscess, and in one of the cases repeating the injection twenty-two times.

Krönlein (Langenbeck's "Klinik," 1870, p. 26) reports a case of death from subcutaneous injection of a solution of strychnia for the cure of prolapse.

but there was no benefit received from the electricity, and the operation, after all, promptly effected a satisfactory cure.

Any traumatism competent to set up the process of repair, and cause enough plastic exudation into the meshes of the loose submucous tissue of the lower part of the rectum and anus to glue it fast to the subjacent muscular coat and external sphincter, and subsequently, when organized, to hold it there, will cure a prolapse. The result will be to render it impossible for the mucous membrane to leave its attachments and to protrude.*

This is the *modus operandi* of most operations for the cure of prolapse. It is also demonstrated by the effect of the operation for the radical cure of internal hæmorrhoids, a disease which, as you know, is generally accompanied by more or less prolapse. Two or three of the little tumors are surrounded by the ligature, or clamped and converted into eschars by the thermo-cautery, and the protrusion, consisting of the remains of the tumors and prolapsed membrane, replaced within the rectum, along with a suppository containing enough opium to keep the bowels for a few days at rest. During these three or four days, the exudation poured out at the points of ligature or cautery effectually binds them fast to the other coats of the bowel, and, when the first stool takes place, there is no more prolapse. It is, moreover, a very unusual thing for the prolapse ever to recur after this operation, if well done; for the parts become more firmly consolidated as the exuded plastic lymph becomes developed into tissue.

---

* MOLLIÈRE ("Maladies du Rectum," etc.,) found that by inserting the nozzle of a blow-pipe through a puncture in the delicate integument of the anus of a young girl, in the dead-house, he was able to distend readily the meshes of the connective tissue beneath it. By continuing to force in air, it traveled upward beneath the mucous membrane of the rectum, which was thus gradually forced out through the anus in the form of an artificial *partial* prolapse. The protrusion of the rectum often observed in the carcasses of dead animals is the result of the same mechanism—the development of gas, by putrefaction in the meshes of the submucous tissue of the gut, forcing out the mucous membrane. In the same experiment on the body of a woman of mature age, he failed in causing any protrusion, and on careful dissection he found numerous little cicatricial bands binding down the mucous membrane to the muscular coat beneath. There were in this cadaver several small folds of loose integument at the verge of the anus—evidences that prolapse had existed at some previous period, which had provoked enough exudation to account for the cicatricial bands of adhesion.

This, then, is the simple mechanism by which operative surgery radically cures ordinary cases of uncomplicated prolapse. In the perfected details of the operation, as done at the present time, the problem as to the safest and most effectual means of producing the necessary traumatism has been decided in favor of the actual cautery, and, in applying it, the ingenious and convenient apparatus of Paquelin leaves little to be desired. The only precaution to be enforced in the use of the actual cautery is, that it should be applied in longitudinal and vertical stripes, or at isolated points, so as to avoid producing a continuous ring of eschar around the whole circumference of the gut, which might cause cicatricial stricture.

The actual cautery, so much extolled by Severinus, and so largely employed for many purposes in the earlier days of surgery, is one of the most ancient remedies for prolapse, and it was undoubtedly effectual; but its extravagant and injudicious use led to subsequent stricture, and for this reason, probably, it fell into disuse. At least, this is what I infer from the following record of an operation by Professor Kluyskaens, of Ghent, who cured a woman of fifty of a large old prolapse: "Three irons, heated almost to whiteness, were successively applied to the mass, and, not satisfied with this, he introduced one of them into the anal orifice, so as to fairly touch every portion of the protruded gut, and reduce it to an eschar."* In a similar case, Dieffenbach, having first reduced the prolapse, and stuffed the rectum with charpie so as to make the anus bulge, passed the cautery-iron slowly around along the line of junction of the skin and mucous membrane, his object being to bring away a ring-like eschar, and thus secure subsequent contraction. Esmarch even now expresses a strong preference for the actual cautery employed in this liberal style.† He burns the entire surface of the protrusion in a chronic case until it is charred and dry, and then smearing it with glycerine or oil replaces the mass.

---

* "L'Observateur Médical Belge," 1834.

† Chapter on diseases of the rectum in the "Handbuch" of Pitha and Billroth, p. 152.

It may possibly be justifiable to get up a stricture inten tionally by this method of operating, as an alternative for so hopeless and distressing a condition as that produced by a large old prolapse in an elderly person; but, in the hope of effecting a cure without so much risk, I would advise you to adopt a modified use of the cautery, somewhat after the following plan: having etherized the patient, elevated the hips as in Sims's position, reduced the prolapse, and introduced a speculum of his pattern of the largest size, proceed to draw a line upon the mucous membrane, with the cautery at a dull-red heat, parallel with the axis of the gut, and repeat this four or more times at equal distances, carrying the cautery each time from a point three inches or more above the anus, slowly down through its orifice, and terminating the line of eschar externally where the delicate integument covering the sphincter joins the true skin. You will have thus a series of parallel vertical stripes of cauterized tissue, the lower extremities of which will appear as rays diverging from the anus. The lines of eschar may be made more numerous, deeper, and broader, according to the volume and duration of the prolapse. In a child, or where the protrusion is not voluminous or of very long duration, I would use a delicate cautery, perhaps no thicker than an ordinary probe, but for a large tumor, in an adult, a more bulky iron; but, in any case, it should be bent nearly to a right angle a short distance from the button at its extremity, so that this may reach all points of the concavity of the rectal surface. By operating in this manner, I believe you would get the full effect of the cautery in producing retractile cicatrices with the least amount of danger of subsequent stricture. Where, after cauterization, a cicatrix is left which encircles the whole circumference of the bowel, constriction in some degree must follow. In a very bad case an operation of this kind might be repeated, new lines of eschar being made in the intervals between the old ones. This I did in the case of a young girl of thirteen, with defective intelligence, who had an enormous prolapse, which had existed from infancy. In this case I added to the linear eschars small scattered points made with a slender, probe-pointed cautery; the effect of the latter, when applied over the sphincter, was remarkable in arousing its contractility.

I have described this operation somewhat fully, as I believe it to be the best method of employing the actual cautery, and applicable to every stage of prolapse amenable to cure by local means.*

But the potential cautery, in the form of strong nitric acid, is also sanctioned by high authority. It acts in a similar manner, and, when judiciously applied, is certainly competent to effect a cure, even of a large prolapse of long standing.†

I should advise you, if you select this remedy, to confine its application also to vertical stripes, as in the case reported by Fleming, for I have been called upon to operate upon a bad case of stricture that followed its too diffuse and liberal application. ‡

---

* This method has received the sanction of Mr. ALLINGHAM'S large experience, as seen in the following quotation from the last edition of his work on "Diseases of the Rectum," London, 1879: "In my last edition I said, 'Dr. Van Buren, of New York, has recommended, in these intractable cases, the application of the actual cautery to the gut in spots or lines, and also to the verge of the anus over the external sphincter muscle, so as to get contraction, and thus support the bowel. This strikes me as a very good suggestion, and I shall certainly try it on a case where other means have failed.' I have now used this method on many hospital and private patients, and effected permanent cures" (p. 164–5).

† Dr. J. ASHHURST, Jr. (in "Am. Jour. Med. Sciences," January, 1873, p. 135), reports the cure of an aggravated case of complete prolapse in a child by applying nitric acid in a broad circular strip around the tumor, sparing the immediate vicinity of the anus, and subsequently plugging the rectum. In the same periodical (for July, 1835) there is an abstract of a carefully-treated case, with minute details of symptoms, in which Dr. CHRISTOPHER FLEMING, of Dublin, cured an "aggravated case of procidentia in an adult." The acid was first applied in lines a quarter of an inch wide and two inches long, at four points, and, on a second application, more indefinitely.

‡ A case is related by ALLINGHAM (2d ed., Philad. reprint, p. 201), of a young woman who came to St. Mark's Hospital suffering from stricture without ulceration, about three inches from the anus, which had been caused by the application of strong nitric acid for the cure of prolapse. There is a case recorded by Surgeon B. A. CLEMENTS, United States Army ("Am. Jour. Med. Sciences," July, 1861, p. 38), who painted a large prolapse in an adult (soldier) with nitric acid, and got a positive and satisfactory cure, without pain. Dr. Clements had an opportunity of examining this man five months later, and reports no stricture. But I should hesitate to receive a solitary instance of negative evidence, although

I would caution you, therefore, not to paint the acid or any other escharotic indiscriminately over the whole surface of a prolapse without careful consideration.

Atony and possible wasting or fatty atrophy of the sphincter-ani muscle are the serious impediments in the way of a permanent cure of old prolapsus of the rectum; and, where a repetition of the actual cautery is not available, I would recommend the use of the electro-magnetic current, which possesses much power in restoring the lost function in other voluntary muscles.

Dupuytren proposed, in these cases, to diminish the diameter of the anus, and also of the bowel just within, by removing with strong scissors an elliptical fold of integument at three equidistant points, the fold including the skin just without, and also a portion of the membrane just within, the orifice.*

Robert, another French surgeon, and Dieffenbach, of Berlin, went still further, and cut out wedge-shaped masses from the over-dilated orifice, afterward applying deep sutures to close the wound, and thus diminish the outlet; and the latter, in other cases, passed stout ligatures beneath portions of the prolapse near its base, and, making traction, cut out with strong curved scissors the portion thus drawn upon, and even, in some cases, extirpated the whole mass. The late Valentine Mott modified Dupuytren's operation, in an aggravated case of prolapse in an adult, by removing several larger elliptical portions entirely from the mucous membrane, and drawing to-

of great interest, as a warrant for this mode of using the acid. It was probably applied with sufficient freedom in this case to cause plastic exudation in the submucous tissue, and, therefore, it cured; but not strong enough to cause a *slough* of this tissue, which is pretty certainly followed by a retractile cicatrix. Here is a distinction requiring both judgment and delicacy in manipulation.

* DUCHAUSSOY, whose paper has already been referred to, says that this operation of Dupuytren was always resorted to by Guersant, at the Hospital for Sick Children, in Paris, in cases too extensive to be cured by simple cauterization of the verge at equidistant points by the hot iron; and he makes the interesting remark that the prolapse was often arrested at once by the cutting operation, although the puckering relied upon by Dupuytren to cure the affection did not follow for days or weeks. The sphincter was evidently stimulated to increased contractility by the simple traumatism, in the same way, I suppose, as a fissure excites spasm.

gether the edges of the resulting wounds by sutures, in addition to Dupuytren's radiating incisions at the verge.

I feel entirely justified, by the absence of any very satisfactory results, in advising you to avoid these cutting operations, unless called for by exceptional complications; for the actual cautery, in consequence of the recent improvements in our modes of applying it, is equally efficient, and infinitely more prompt and safe.*

Of course, after any of these operations, the patient should be confined to an horizontal position for a week, and employ a bed-pan, when the bowels act, for at least double this period, to diminish the possibility of relapse. If laxative medicine is required, castor-oil is to be preferred, and its action aided, if necessary, by a tepid enema to facilitate defecation.

Finally, I must warn you against undertaking the entire removal of a prolapse, especially if the tumor be large. The mention of this operation, which still lingers on the pages of most of your text-books (although dropped from the most recent), implies a sanction of it which is based for the most part upon imperfect diagnosis, and only justified by the argument of imitating Nature, inasmuch as recovery has, in exceptional cases, followed sloughing of the tumor. With the means of palliation and of radical cure now at our command, and in view of the danger of opening the peritoneal sac, I should hesitate to endorse such an operation as justifiable. In an extreme case which had resisted reduction by taxis under ether, I would elevate the patient's pelvis, apply cold, even ice, to the tumor, give opium internally, and, if there were any evidence of extensive invagination, I would take into consideration the possible propriety of explorative laparotomy.†

---

* It has also been proposed to tie off little masses from the surface of a prolapse by ligatures, imitating the operation for tying off internal piles, and suggested, no doubt, by the good effects of the latter operation in curing the prolapse present in such cases; and Dr. Beane, of this city, influenced probably by similar reasoning, recently reports the cure of a large complete prolapse, in a woman of forty-two, by applying the clamp successively to the tumor at four points, inclosing at each point a fold of mucous membrane an inch and a half long, cutting off half the tissue projecting beyond the clamp, and cauterizing the remainder.

† Dieffenbach, as I have mentioned, includes extirpation among the operations he has done for the cure of prolapse, and it is endorsed by Bardeleben, Copeland,

It remains for us to consider what treatment is called for in the third variety of complete prolapse, where the rectal protrusion is the result of more or less extensive intussusception, and consists mainly or entirely of the invaginated mass —what Esmarch styles a *prolapsus coli invaginati ex ano*—a protrusion of the already invaginated colon through the anal

---

Liston, **Blandin**, and **Chassaignac**, but I have found no record, distinct and authentic, of a successful result following it where the tumor was large, although no doubt exceptional cures may have occurred. **Brodie**, in the most aggravated cases, for which he suggests no other resource than "the horizontal position and a course of Ward's paste," proposed to apply ligatures and then cut off the tumor. He has never known it to be done, but thinks it right to imitate Nature in her occasional sloughing from invagination (Lectures on Diseases of the Rectum, in London "Medical Times and Gazette"). These opinions must have been based upon the false doctrines promulgated by Boyer and Levret, that a prolapse always consists of mucous membrane alone. Even so high an authority as Mr. **Erichsen** makes the decidedly equivocal statement (in the last edition of the "Science and Art of Surgery," Philadelphia, 1878, vol. ii, p. 705), that continuity of the surface of the prolapse at its base with the integument investing the borders of the anus, without any intervening depression, "constitutes the mark of distinction between ordinary prolapses and invagination of the whole thickness of the gut; for, in the latter affection, which is extremely rare, there is a deep and distinct sulcus between the protrusion and the margin of the sphincter"; or, in the nomenclature I have adopted, the presence of a "sulcus" is the diagnostic mark between *partial* and *complete* prolapse. Subsequently, under "treatment" (at p. 706), he says: "When the prolapse is considerable, and the ordinary palliative treatment after a proper trial fails in effecting a cure, it will be necessary to remove the protruded mass by operation." Now, whoever follows this advice, relying upon the absence of a sulcus, and impressed with the idea that invagination of the whole thickness of the gut is "extremely rare," will be liable, if he employs the knife, to open a peritoneal pouch, and possibly to witness the escape of coils of small intestine; and in any case he will incur the danger of losing his patient by peritonitis, as in the case which I have mentioned, in which there was no "deep and distinct sulcus between the protrusion and the margin of the sphincter." I regret to differ with Mr. Erichsen, but am compelled to reassert the facts as I have observed and stated them in describing what I have denominated "the first and most common variety" of *complete* prolapse, which I have found by no means rare, namely, that the whole thickness of the bowel, commencing at its lowermost portion, slips through the sphincter, and that in this common variety of the affection (which too often passes for prolapse of mucous membrane alone) *there is no sulcus whatever.* **Trélat** and **Delens**, in the "Dict. Encyclopédique" (t. ii, second series, p. 717), the best French authority on this subject, express the opinion that the sulcus in question should not be regarded as a differential sign of absolute value, for "its absence, and the consequent *direct continuity of the skin of the anus with the mucous membrane covering the tumor, is frequent, even where the prolapse includes all the coats of the bowel*" (p. 720).

orifice. Here there is generally an over-dilated anus, but the lower rectum, excepting the consequences arising from the presence of the tumor, which can be readily replaced—although unreduced as regards invagination—in its cavity, is otherwise healthy. It is plain that none of the operative methods hitherto described can meet the indications presented by such a case as this. Tightening up of the anal orifice might prevent protrusion externally, but it could do no more. In truth, the essential feature of this form of prolapse, which renders it so grave in character, so almost necessarily fatal from its very nature, is the intestinal intussusception, of which it is the outcome. If there are any cases in which spontaneous recovery from this condition has taken place, except by sloughing of the invaginated mass, I have been unable to find them; and there are only two or three instances, in a collection of one hundred and thirty-one cases of this kind, in which a judicious repetition of copious injections of water, or air, with inversion of the body, and the use of anæsthetics and opium, seems to have been followed by a successful result.* Nevertheless, these remedies should be faithfully tried. Howship, many years ago, praised the effect of copious injections of warm fluid deliberately thrown into the bowel with a certain amount of gentle, guarded force. This measure is properly alternated with the insufflation of air by means of a bellows, or the introduction of carbonic-acid water from a syphon.†

---

* See HUTCHINSON's table, already quoted ("Med.-Chirurg. Trans.," vol. vii, 1874). There is a case of recovery in a child, reported by M. Caberet ("Schmidt's Jahrbücher," 101, 1859, p. 322), with a prolapse twelve inches long. A sound could be passed up some distance between the walls of the rectum and the tumor. Reduction was effected by the aid of a gum-elastic bougie, which was left in several hours to prevent relapse. According to Mr. Hutchinson, a similar measure succeeded in the hands of Dr. Osborne. There is a case of success following the use of enemata ("Lancet," March 19, 1859, p. 287) in a child of eighteen months. A tumor could be felt in the rectum. Powerful injections of warm water were employed, followed by cautious narcotism. In Professor Sands's more recent case of successful abdominal section for obstruction in an infant, where the tumor could be felt in the rectum, the bulk of the invagination was very much diminished in size by injections and other means, but entire reduction could not be accomplished.

† BRINTON's estimate of the relative merits of injections of water and of air seems to me to be just and well expressed. Speaking of the latter, he says ("Intestinal Obstructions," London, 1867, p. 119): "There are certainly instances on

In a child, the action of an enema may be assisted by holding the body suspended by the feet, with the head downward; and it may be repeated while the abdominal muscles have been set entirely at rest by an anæsthetic. After judicious perseverance in these manœuvres for a reasonable time, the patient should be cautiously narcotized, in order to quiet the peristaltic action which is constantly pushing on the invagination. This point of practice and also the irrationality of administering strong purgatives in obstruction of the intestines have been ably enforced in the writings of the late Dr. Brinton, of London.† If the patient's condition justifies a repetition of these efforts, they may be repeated; but in the case of an infant, where symptoms of acute strangulation are urgent, you must not persevere many hours, for there is a hope of relief from the knife, and, as in strangulated hernia, an operation, to secure the best chance of success, must be done early.

Except in the more acute cases of complete strangulation, which occur most frequently in very young children, invagination to the extent of rectal prolapse is a condition of slow progress, because, as Monro remarked of his cases, "there is a narrow passage for the fæces in all of them." For this reason, the remedies just detailed are not so urgently demanded,

---

record in which an obstruction, having every symptom of an intussusception, has been suddenly removed by an inflation of the patient's rectum with a pair of bellows, the relief having instantaneously followed that severe pain which complete distention brings about. And in one case this successful inflation was accomplished by successively injecting the solutions of the sesqui-carbonate of soda and of tartaric acid, so as suddenly to effervesce within the intestines of the shrieking patient. Not having personal observations of this kind to offer, I am disqualified from criticising such a procedure, save to point out that, while experience seems almost to limit its usefulness to intussusception of the large intestine, it appears to be, on the whole, a more sudden and violent but less manageable and powerful distensive agent than a liquid enema, which, with reasonable care, may be easily made to fill the whole large intestine, as far as the ileo-cæcal valve, without inflicting upon the patient any danger, or even much suffering. Indeed, in the early stage of obstruction, the quantity in which such an enema can be introduced and the state of the belly during its presence in the large intestine materially help to fix the locality of the obstruction, by demonstrating whether it is or is not above the ileo-cæcal valve."

* "Lancet," April 11, 1863; and "Intestinal Obstructions," etc., London, 1867.

and more attention is often given to means for reducing and retaining the prolapse. If the invagination is to be disentangled, its reduction must be begun from below, i. e., the portion of gut last everted must be tucked in first, as in the ordinary taxis for reducing a hernia, and there is nothing to be gained by pushing up the whole tumor in a mass. Bardeleben makes a point of applying pressure, as by a small sponge and elastic bandage upon the lowermost extremity of the protrusion, where the orifice is situated, in order to effect its gradual return by *inversion*. Cabaret succeeded by tucking in the invaginated gut by the aid of a bougie.

But, as we have seen, success has been rarely attained by any of these devices. Amputation of the invaginated mass, as in the case in which the Florentine surgeon mistook it for a polypus, or in Holmes's case at St. George's Hospital, where sloughing had already set in, can hardly be recognized, seriously, as a remedial measure, although it has the same justification as the perfunctory operation of extirpation, heretofore generally admitted. Thus, in cases of prolapse with extensive invagination, death takes place almost inevitably, and, as a rule, by the slow process of exhaustion—from interrupted function of the intestine, perhaps diarrhœa, aided, in children, by the constant straining and tenesmus, and, possibly, by gradual sloughing of the prolapsed parts—rather than by the more rapid process of strangulation and incomplete obstruction. The occurrence of peritonitis seems to be singularly infrequent. With this very unpromising outlook, Mr. Hutchinson, of the London Hospital, in 1873, having already witnessed the fatal issue of several similar cases, following the precept that a doubtful remedy is better than none, determined to open the abdomen in order to reach the invagination and restore it to its natural condition. This he succeeded in accomplishing without any difficulty, the whole operation occupying but twenty minutes, and his patient, a child of two years of age, recovered without an untoward symptom. In 1875, Mr. Howard Marsh, of St. Bartholomew's,* in a similar case of invagination with rectal protrusion in a child of nine months,

---

* "St. Barth. Hosp. Rep.," xii, 1876, p. 95.

"pale, wasted, and much exhausted," repeated the operation and succeeded in disentangling the gut with equal facility. The infant recovered well from the shock of the operation, but fell into collapse some ten hours later and died. Examination of the body showed that the invagination, though of the ileo-cæcal variety, "had left scarcely a trace of its presence." These two cases, especially the first one, tended to modify the unfavorable impression prevalent in the profession as to the propriety of this operation, which is now spoken of as "laparotomy," a term applied to it by our countryman, Dr. J. Ashhurst, Jr., of Philadelphia, and adopted from him by Bryant. In 1878 it was repeated with success by Professor H. B. Sands, in this city, on an infant with acute strangulation from invagination. The tumor could be felt from the rectum, and also by manipulation of the abdomen, so that the diagnosis was clear. There was somewhat more delay experienced in disentangling the invaginated gut in this case, and its brilliant success was largely due to the early recourse to abdominal section.

I can not discuss, here and now, the considerations which influenced Brinton, in 1867, and Ashhurst, in 1871, and others who had carefully studied the history of this subject, to conclusions against abdominal section or gastrotomy, as it was then called, in intussusception; but the reasons justifying interference given by Hutchinson, Marsh, and Sands, and, above all, their success, seem to me to make it our duty, in the presence of so hopeless a condition as prolapse with invagination of this kind, to stand ready to imitate them.

In addition to the increasing confidence inspired by anæsthesia and antiseptics, and the decreasing fear of peritonitis derived from the experience of the ovariotomists, the two principal reasons which make it proper to assume this position are these: 1. The certainty of diagnosis derived from the presence and peculiar features of the rectal tumor or protrusion; 2. The almost utter hopelessness of the prognosis without interference, which includes the poor chance of benefit from forced injections, etc., as well as the rarer possibility of sloughing.*

---

* Mr. HUTCHINSON has put his opinion on record in these words: "In the peculiar form of intussusception beginning at the cæcum and advancing until the

In conclusion, I must caution you not to wait in these cases for violent symptoms to justify serious measures. In not a few of the reported cases, these symptoms were strangely wanting, and in others they were by no means severe in proportion to the danger. And do not lose sight of the distinction between cases of acute strangulation, as it occurs in infants, and the more numerous chronic cases in which there is a narrow passage still open. It is to these latter especially that I now refer. When, therefore, a study of a case of prolapse has led you to recognize the presence of an irreducible invagination, do not be misled by the apparent absence of urgent signs of danger. With a certainty of diagnosis not attainable in any other variety of intestinal obstruction, you will have it in your power, in most cases, to plan out your operation calmly, and to select deliberately the most favorable moment for its performance.

Prolapse occurs, not unfrequently, through an artificial anus—both in the inguinal and lumbar regions. It is almost always "complete," and sometimes voluminous in size. This form of the disease calls for palliation by means of a truss, or similar retentive means added to the ordinary dressing.

LEAD POISONING IN FROGS.—ARTICLE II.

BY JOHN J. MASON, M. D.

IN July, 1877, I published in this JOURNAL some experiments which showed for the first time the effect on frogs of subcutaneous injection of the acetate of lead, together with that induced by keeping them in a solution of the same salt.

Injected under the skin, the poison caused immobility of the animal in a few hours. The heart was found to be motionless, while the electrical reactions of the nerves and muscles remained intact. This was called acute poisoning. When, however, the salt was slowly absorbed through the skin, the

---

inverted ileo-cæcal valve presents at the child's anus, I should suspect that an operation will always be required, for I know of no reliable record of the recovery of such a case, either by gangrene, or by the measures to which we may apply the name of rectal taxis" ("British Med. Jour.," August 31, 1878).

muscles of the posterior extremities became paralyzed, while the heart continued often in perfectly normal action. This was called chronic poisoning.

It was stated that the large veins of the affected extremities were generally enlarged, the muscles were paler and firmer to the touch than when healthy, and in all the cases reported appeared to present what Professor Erb has called "*Entartungsreaction*" to electricity.

In the "Centralblatt für Nervenheilkunde," April, 1880, Dr. Alfred Kast, assistant at the electro-therapeutical station in Heidelberg, publishes an article in the shape of "*Controlversuchen*" on the subject, at the suggestion and under the direction of Professor Erb. The experiments were made so as to fulfill very nearly the same conditions as those of my own, with the following results and conclusions: In solutions of the acetate of lead (·7–1,000) after from ten to twelve days the frogs, besides much desquamation, showed in a striking manner weakness of the hind legs, with "enormous increase in volume of all the soft parts." The latter condition they regard as the result of infiltration, causing hardening of the muscles. The paralysis is a natural consequence of the infiltration, purely mechanical reasons accounting for the inability of the muscles to contract. There was no trace of "*Entartungsreaction*." Weak solutions of the acetate, when often changed, seem to exert no influence on the animal. Only in one case, in which the solution remained for twelve days unrenewed, were the above-mentioned symptoms observed. The microscope showed no change in nerves or muscles, except inflammatory infiltration of the latter.

They then go on to say: "The peculiar reaction of the animal to the influence of the acetate of lead, the whole appearance of which, even at first sight, must seem entirely different from lead paralysis, requires confirmation by the use of other lead salts." Acetate of lead is very unstable, and the presence of a white precipitate at the bottom of the vessel suggested the presence of free acetic acid liberated by the carbonic acid of the air and of the animal. Chloride of lead was tried in ·4–·8 per 1,000 solutions, and with entirely negative results. After the closest observation for six months, during which time the solution was renewed every other day, and frequent electrical examinations were made of the muscles, not the slightest anomaly was noticed.

They then conclude that it is the free acetic acid which causes the muscular disturbance, and not the lead—at all events, that the symptoms have nothing to do with lead paralysis.

If the latter part of this sentence relates to lead paralysis in man, I am willing to endorse it. It must not be forgotten that we are studying lead paralysis in frogs, a comparatively new affection, which, although the picture "at first sight" may be different from what is observed clinically and at dispensaries, still presents some symptoms not unlike those seen in man. That these symptoms are not caused by the acetic acid, but by the lead, I can now affirm as proven beyond doubt by experiments to be reported further on. It is not my intention to lay much stress on the electrical reactions. The Heidelberg observers understand best what they mean by "*Entartungsreaction*," and it would seem like presumption to doubt the accuracy of their report on this point. It has occurred to me, however, that if they would wait until the limbs were completely paralyzed, as they often are in wrist-drop, for example, they would find, in some cases at least, certain muscles or groups of muscles which would respond better to voltaic than to faradaic electricity. In man, we generally see the patient when the extensors are unable to perform the function of raising the wrist. In some of these cases "*Entartungsreaction*" is present, but we should not expect to find it in a newly and partly developed case. Weakness in the limbs is not paralysis, either in frogs or in mammals, and to apply tests for "*Entartungsreaction*" to muscles before they are even paralyzed seems, even at first sight, wholly unfair.

In my notes I find the record of an experiment made shortly before the publication of my first paper on this subject, which, in view of its instructive character, may suitably appear here.

May 4, 1877.—Two specimens of *rana pipiens* placed to-day in a solution of acetate of lead 24 grains, water 48 fluidounces. The larger frog has its femur broken, and perforation of one cornea. Is otherwise well and active. *9th.*—The lame frog remains motionless in the solution. When taken out, breathes normally, opens and shuts the sound eye, and moves its anterior extremities freely. Posterior limbs completely paralyzed; sensation, however, remains. Animal killed by cutting through the medulla oblongata, the section causing no motion in the posterior extremities. Heart of normal size and beating 25 to the minute. Irritability lost in the sciatics. The muscles are but slightly irritable to faradization, while a mild voltaic current causes slow but well-marked contractions in nearly all the muscles. There was but slight swelling of the limbs, and no stiffness of the articulations. Professor Austin Flint, Jr., witnessed this reaction to the two currents. Examined by the microscope, the muscular elements showed no evidence of degenerative change. On the following day the other animal was found motionless, and was tested like the other, and showed the same symptoms and muscular reactions. In the latter case, however, "*Entartungsreaction*" seemed to be limited to the gastrocnemii and the muscles of the feet. In fact, in nearly all my later observations this difference in different muscles has been a marked feature, which was not sufficiently recognized at first.

A question has been raised by my critics, as it seems to me, of much greater importance than that of the existence of "*Entartungsreaction*": are these peculiar effects to be ascribed to the acetic acid, to the lead, or to both combined in the acetate?

Are they due to the free acetic acid? To settle this point, it is necessary to try the experiment after estimating the quantity of acid which could be set free from the amount of the salt employed. Taking 24 grains as the maximum, I have the opinion of expert chemists that 8·4 grains, by weight, of glacial acetic acid at 100 represents the quantity desired. The glacial acetic acid at 100 was procured from Messrs. Eimer & Amend, of New York, and to 48 fluidounces of water 8·4 grains, by weight, were added. In this bath, occasionally renewed, I kept frogs without the slightest injurious effect for several weeks, while others, caught at the same time from the same pond, succumbed in from four to five days in the acetate-of-lead solution.

It will be noticed that the above-described method of procedure is in accordance with the supposition that all the acid in combination in 24 grains of the acetate is liberated. On weighing the precipitated carbonate of a solution in which frogs have succumbed, it can readily be seen that but a small proportion of the acetate is in reality decomposed.

Other salts of lead are very insoluble, but, in view of the remarkable immunity which the Heidelberg frogs seem to enjoy—living for six months in perfect health in solutions of chloride of lead ·4–·8 per 1,000—"*Controlversuche*" became imperative, and on July 31st last I made a solution of the same strength (chloride of lead, 18 grains, water, 48 fluidounces), and four freshly-caught specimens of *rana halecina* were placed in the globe containing it. *August 2d.*—Two frogs were found motionless. Hearts beating normally. Muscles in the same condition as in those poisoned with acetate of lead. On the next day the two other frogs were found dead. At the same time three other specimens were placed in a solution of ·8–1,000 of the nitrate of lead, with the effect of killing them in about two days.

19th.—Placed three vigorous, freshly-caught specimens of *rana halecina* in an ·8–1,000 solution of chloride of lead (procured from Eimer & Amend). Same day, three specimens of same species placed in an ·8–1,000 solution of acetate of lead; three others in 48 fluidounces of water, to which 8 grains, by weight, of glacial acetic acid at 100 had been added, and three others in 48 fluidounces of rain-water. All the solutions were renewed every other day. Weather warm. The four glass globes were numbered and labeled. *23d.*—Frogs in acetate of lead are all affected with the usual symptoms. *25th.*—One of the frogs in the chloride-of-lead solution motionless. Posterior extremities swollen. Some response of muscles to both currents. *September 1st.*—Another frog in the chloride-of-lead solution is affected by the poison, which seems to have worked chiefly upon the flexors of the posterior extremities. The animal strikes out vigorously, but shows little or no power in the flexors. Animal killed, and the muscles of the posterior extremities tested separately for electrical reactions. Flexors respond but feebly to either current, while extensors retain almost their normal irritability. No "*Entartungsreaction*" observed. The denuded preparation, after having been thoroughly washed and the muscles divided transversely, was then suspended in a small glass chamber and exposed to sulphureted hydrogen gas for half an hour. The presence of lead in the muscular substance was distinctly shown by brownish discoloration. Preparations from healthy frogs were found to remain unchanged in color under the same conditions.

4th.—The last frog in the chloride-of-lead solution motionless. Heart beating normally. Feeble movements in anterior extremities. Hind legs prepared, and muscular contractility tested. Above the knee, the muscles do not respond to either current. Below the knee the gastrocnemius muscle acts much better to the voltaic than to the faradaic stimulus, while the muscles of the feet respond actively to both currents. The preparation, exposed an hour to sulphureted hydrogen, after washing, becomes discolored to a marked degree. In the mean time the specimens in the dilute acetic acid and those in rain-water are in perfect health.

The German authors stated that they were led by the importance of the subject to repeat my first experiments. If they are correct in so regarding it, others will perhaps follow their example, and to such I may be allowed to emphasize the following suggestions:

1. Do not expect to see a typical case of lead paralysis in a batrachian.
2. Wait until the muscles are no longer capable of responding to the will before testing for degenerative changes.

ON SOME POINTS IN THE ANATOMY OF THE NASAL FOSSÆ.

By D. BRYSON DELAVAN, M. D.

The great frequency with which the structures composing the nasal fossæ become so altered as to produce important pathological conditions, as well as the additions made during the last few years to our knowledge of the diagnosis and treatment of such conditions, renders the study of the anatomy of the nose one of peculiar interest. In the following pages an effort has been made to present a concise description of the parts, together with certain practical suggestions arising therefrom.

The nasal fossæ, two in number, are separated in the median line by the nasal septum. They consist of three divisions: the vestibule of the nose, the respiratory region, and the olfactory region.

The *vestibule* is that part of the nasal canal which is surrounded by the anterior cartilages of the nose. It is covered by a continuation of the exterior integument, which gradually assumes the characteristics of a mucous membrane and possesses several layers of pavement epithelium, of which the uppermost one is composed of horny cells. This epithelium extends backward to the anterior margin of the inferior turbinated bone and the commencement of the inferior nasal duct, where it becomes ciliated. The skin has also vascular papillæ, with both simple and compound loops, and, in the lower part of the nose, long, stiff hairs (vibrissæ), as well as large sebaceous follicles. It is sparingly supplied with blood-vessels. The nerves are derived from the trigeminus, and consist of filaments which probably end in terminal bulbs.

The Respiratory Region.—The nasal fossæ proper, with the exception of a limited part known as the regio olfactoria, may be regarded as a continuation of the respiratory tract. Each fossa communicates with four sinuses: the frontal, the sphenoidal, the maxillary, and the posterior ethmoidal. The mucous membrane covering the respiratory region and its accessory sinuses is called the Schneiderian or pituitary membrane. It is devoid of papillæ, and is covered with cylindrical ciliated epithelium like that of the trachea, the ciliary current being invariably toward the choanæ (posterior nares). During an attack of coryza, this epithelium is cast off, and may be found in great abundance in the mucus, where, under the microscope, it has often been mistaken for a true parasite. It contains also goblet cells. Under the epithelium is a true membrana mucosa, which forms at the same time a periosteum for the bones, and is composed almost entirely of connective tissue, and supplied scantily, if at all, with elastic-tissue elements.

The mucous membrane may be divided into two varieties: a *thinner* membrane, covering the internal surface of the turbinated bones and the accessory sinuses, and the *thicker* membrane of the nasal fossæ proper. The *thinner* membrane contains many acinous glands. In the adjacent cavities the glands are less abundant, except upon the internal wall of the maxillary sinus. Here and in the sphenoidal sinus the glands consist of several cylindrical tubes, with connecting single, oblong acini. The epithelium of the latter is pyriform, while in the tubes it is cylindrical. The mucous membrane itself is pale in color and sparsely supplied with blood-vessels. Special nerve terminations have been described as existing in these sinuses. They are probably nothing more than terminations of fibers from the great sympathetic, which have ganglionic cellules at their extremities. The *thicker* membrane covers the lower part of the nasal septum and the inferior and middle turbinated bones. It is lined with the same ciliated epithelium, and in the anterior two thirds of the turbinated bones forms only a delicate, slightly corrugated covering for the subjacent parts. Posteriorly, however, the surface is thrown into thick folds, evidently designed to increase the extent of surface of the mucous membrane.

The membrana mucosa forms a fibrous network, which passes between the glands and vessels, and connects the mucous membrane with the periosteum. Its characteristics resemble more nearly those of periosteum, so that it may properly be classed as a part of the latter. The glands of this region vary somewhat from the acinous type, and are composed of tortuous tubules, having many sinuses and oblong offshoots. They are lined on their inner surface with low cylindrical epithelium, and sometimes assume a circular, sometimes an oval, shape in the microscopic section. The thickness of the pituitary mucous membrane is due not only to its mucous glands, but more especially to the existence in it of true erectile tissue, as well as of numerous venous plexuses, both of which are more abundant at the posterior parts of the turbinated bones and the septum. The erectile tissue, as was demonstrated several years ago by Professor Henry J. Bigelow, of Boston, is analogous to that of the penis. Hence he proposes to call it the "turbinated corpora cavernosa." He has shown that, while the venous loops described by Kohlrausch may be distended by injecting the jugulars, the same process does not distend the erectile tissue. By removing a small piece of the mucous membrane which covers the erectile tissue, and directing a current of air against the opening thus made, the corpora cavernosa may easily be inflated. This effect may be experienced by inhaling an irritating vapor, or as one of the symptoms of an attack of coryza. ("Boston Med. and Surg. Jour," April 27, 1875.)

In the bony framework of the inferior turbinated bone, large, bright-looking interspaces are seen in the fine trabecular substance, which are filled with fibrous tissue containing pale lymphoid cells. In sections of this fibrous tissue are usually found transverse sections of delicate vessels, the walls of which are apparently composed of fibrous tissue. In order to reach the outer surface, they either perforate the bone or lie in recesses separated from the soft parts only by the periosteum. In the middle third of the bone, where the osseous structure contains the largest cavities, we find in the vicinity of the vessels large round and polygonal, glistening cells, analogous to marrow-cells. Most of the above-mentioned vessels are probably lymphatics. The arteries of the inferior turbinated bone, three or four in number, are derived from the posterior nasal artery.

The vomer and the middle and inferior turbinated bones are subject to certain hypertrophies and resulting displacements, which cause varying degrees of occlusion of one or both nostrils, and thus give rise to obstinate conditions of so-called chronic catarrh. Attention was first called to this fact by Professor Harrison Allen, of Philadelphia, and the results of his researches form a most valuable addition to our knowledge of the subject. (See "Am. Jour. of the Med. Sci.," Jan., 1880.)

The olfactory region is situated in the uppermost part of the nasal cavity. Its inferior limit in man has not yet been accurately determined. According to the generally received views of Schultze and Ecker, it is probably limited to the roof of the nasal fossæ, the superior turbinated bone, and the corresponding part of the nasal septum. The mucous membrane of this part is of a dull, yellowish-brown color, and is perceptibly thicker and softer than that of the respiratory region. Its color proceeds from fine pigment-molecules, which are imbedded partly in the bodies of the cylindrical epithelial cells and partly in the cells of a special gland-formation which are found here. Soon after death, however, the color becomes unrecognizable. Under the microscope, the olfactory region is seen to be bounded by a tolerably well-defined, serrated border, although islands of ciliated epithelium, such as is found in the respiratory region, are frequently found scattered about in different parts of it.

The differences in structure of the olfactory mucous membrane depend upon the character of the epithelium, upon the presence of peculiarly constructed glands (Bowman's), and upon the relations of the nerves. The fundamental layer of the mucous membrane is composed of a finely fibrillated connective tissue, rich in cells, the arrangement of which is determined by the numerously distributed glands, nerves, and vessels which it contains. As in the other regions of the nasal cavity, the mucosa seems to pass without a well-defined limit into the periosteum. In many places aggregations of small, pigmented nuclei are found, some in the shape of long strips lying near the nerve branches, some in other situations, in rounded or irregular groups.

The olfactory epithelium attains a very considerable thickness. It consists of a single layer of very elongated cells, which Schultze has described to be of two kinds—epithelial cells and olfactory cells. The olfactory cells are slender, delicate structures, in which may be distinguished a cell body and two prolongations, going in opposite directions—the one to the periphery, the other centrally. The bodies of the olfactory cells are not all situated in the same plane of the epithelial stratum. The majority, however, occupy its deeper parts. The cell body appears spindle-shaped or pyriform. It is finely granulated, and has in its central and widest part a spherical, light-colored, dull-outlined nucleus. The peripheral prolongation is generally rod-shaped, but now and then presents slight sinuosities. It is sharply outlined and homogeneous, and its free extremity in some animals (amphibians and birds) has a tuft of the most delicate filaments, which project above the surface of the epithelium. The opposite prolongation is extremely delicate and perishable, and occasionally resembles the finest nerve fibrils, being sometimes covered with varicosities and sometimes entirely smooth. It runs continuously and undivided as far as the base of the epithelial stratum, when it appears to meet the final radiations of the olfactory nerve, partly intertwining with these radiations and then escaping further investigation.

The indifferent epithelial cells appear in the form of an elongated cylinder, with a very finely granulated cell body and an ellipsoid nucleus. Near the latter, the cell suddenly contracts into a slender, very pale, centrally directed prolongation, the inferior end of which becomes somewhat wider, and branches into a number of delicate filaments, by means of which the cell is attached to the fundamental layer of connective tissue. These widened extremities of the cells often contain a brownish, partly nuclear, partly diffused pigment. Viewed upon the plane surface, the number of olfactory cells is apparently larger than that of the cylindrical cells. Each one of the latter, however, is generally surrounded by six of the olfactory cells, which completely fill the intermediary spaces between the cylindrical bodies. Both varieties of cells are so accurately adjusted to each other that, especially in the wider part of the epithelial cells, fine longitudinal furrows may be seen, into which the peripheral continuations of the olfactory cells have been received. The surface of the epithelium is covered by a delicate membrane discovered by Van Bruns, and called by him the membrana limitans olfactoria. He compares it to the membrana limitans externa of the retina, and describes its free surface as being plane and even, while its lower surface completely covers the rounded terminations of the epithelial cells. The peripheral prolongations of the olfactory cells pass through this membrane, and terminate with bare extremities at the level of its free surface.

The olfactory nerves are branches from the olfactory ganglion, which emerge through the apertures of the lamina cribrosa, and are composed entirely of non-medullated filaments, which resemble embryonic nerve fibers. They next anastomose in the deeper layers of the mucous membrane, and form a dense plexiform meshwork, which sends fine branches toward the surface. In these branches the axis cylinders are broken up into many very fine, varicose fibrils, which ascend to the limit of the epithelial layer, where they are lost. Most authors agree with Schultze that there is a distinct connection between the nerve fibrils and the olfactory cells. Exner believes that the nerve fibrils connect with the epithelial cells also. He argues, moreover, that intermediary forms between the two varieties of epithelium are found, which would prove that they are not different structures, but one and the same thing. Neither of the latter views has yet been established.

Bowman's glands, peculiar to the olfactory mucous membrane, are found in it in large numbers. They occupy almost the whole thickness of the mucous membrane, their bodies being situated in the deeper layers of the connective tissue. In man their shape varies somewhat from that of simple tubules, as several glandular tubes ordinarily unite in a common excretory duct, so that in some cases the gland almost appears racemose. The glandular cells are partly round and partly irregular in shape, and have many pale nuclei, together with a brownish-colored pigment.

Lectures.

A CLINICAL LECTURE ON THE DIAGNOSIS OF CUTANEOUS SYPHILIS.

By GEORGE HENRY FOX, M.D.,

CLINICAL LECTURER ON DISEASES OF THE SKIN, COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

Gentlemen: There is no class of eruptions with which it is so important for you to become familiar as with the cutaneous manifestations of syphilis. Wherever you go to practice medicine, you will find this disease prevailing in a greater or less degree. You will meet with it in the old and in the young, in the rich and in the poor, and among the virtuous as well as among the vicious. You will meet with it, moreover, at unexpected times and in unexpected places. You will confront it when no suspicion of its existence has been awakened, and, if you then fail to recognize those characteristic symptoms which betoken the presence of this subtle disease, the inevitable result will be—discredit to yourself and detriment to your patient.

As for the treatment of syphilis, this is usually a simple matter. There are few physicians who are unable to manage the disease successfully in the vast majority of cases, provided that the diagnosis is well established. The difficulty lies in the diagnosis of the disease. Many physicians who are abundantly able to treat syphilis successfully are utterly unacquainted with those striking features which characterize its eruptions, and which enable the physician with even a slight amount of training to declare at first glance that such eruptions are syphilitic. And yet the diagnosis of syphilis of the skin is quite as simple a matter as its treatment, when once a familiarity with its characteristic features has been acquired. This familiarity you can not gain from books or from lectures. It is only to be acquired through careful observation of actual cases. You will find many opportunities hereafter for learning the most approved treatment of syphilis and other skin diseases, but let me assure you that, unless you practice medicine in one of our largest cities, you may never again enjoy the opportunities for perfecting yourselves in diagnosis which are now afforded by the clinic.

To return to the subject of syphilitic eruptions, let me impress upon your minds that these are not ordinary skin affections of which the syphilitic poison in the blood is merely the exciting cause. The eruptions of syphilis are peculiar. They are stamped with the impress of the disease, and so plain are the distinguishing marks that their nature is usually unmistakable. Now and then, to be sure, we meet with a case in which the lesions are imperfectly developed, and in which the most expert diagnostician may be perplexed or even led into error respecting the nature of the case, but such instances are exceptional. In the great majority of cases, the experienced physician is able to make his diagnosis at once from the appearance of the eruption, and without asking the patient a single question.

And now let me impress upon your minds another fact. In syphilis, and especially in its late forms, the history given by the patient is the most insecure basis for a diagnosis. No matter how intelligent your patient may be, it will not be safe to place your entire dependence upon his statements. I do not mean to tell you that syphilitic patients are especially prone to be dishonest, for such, in my experience, is not the case. But they are very frequently ignorant of the fact that they have ever had an initial lesion or any of the early secondary symptoms. I have examined a dispensary patient with an erythematous syphilide, which you know is the earliest manifestation of constitutional syphilis, and heard him assert positively that he had never suffered from any private disease, when I knew well that in all probability his chancre, or "initial lesion," had not yet disappeared. It had caused him no discomfort, and he had never noticed it. He was perfectly honest, but exceptionally ignorant. You must bear in mind that many patients have a very mild form of syphilis at the outset, and are ignorant respecting the character of their symptoms. The cutaneous lesions do not itch, and, if but slightly marked, are very apt to be overlooked. The slight sore-throat is naturally attributed to the effects of cold; the headache, which is rarely absent at this stage, is not regarded as anything unusual, and any arthritic pains which may be noticed by the patient are thought to be rheumatic. Years afterward, when late lesions of an undoubted syphilitic character have developed, the patients naturally and honestly assert that they have never had any venereal disease whatever. On the other hand, many patients with a non-specific eruption lead the physician who confides in their history into giving them a thorough and unnecessary course of anti-syphilitic medication. They say that once on a time they had "the disease." Perhaps they had a simple venereal ulcer or a gonorrhœa, and nothing more; or perhaps they did have syphilis; and yet it does not follow that every skin affection from which they subsequently suffer is to be treated with mercury and iodide of potassium.

I repeat, gentlemen, that the history given by a syphilitic patient is an insecure basis for a diagnosis. It may serve to verify your diagnosis when you have made it, and in some obscure cases it may be considered to have a certain amount of value in deciding as to the nature of the case; but it is certain that, the more we depend upon our eyes and the less upon our ears, the nearer shall we approach to the perfection of diagnostic skill. Let me urge you to endeavor, then, in so far as it is possible, to make your diagnosis of a syphilitic eruption without seeking aid from the patient. If the eruption is of syphilitic origin, the fact will be written upon the patient's skin. To acquire familiarity with this language, you have only to study carefully and diligently the numerous cases of cutaneous syphilis which appear in the clinic.

There are numerous features peculiar to the syphilitic eruptions, and some of them defy description. All of them can best be learned through observation, and I shall therefore merely call your attention to them.

Let us first consider the localization of syphilitic eruptions. You know that certain non-syphilitic affections exhibit a marked tendency to occur in certain regions and to avoid others. While psoriasis, for example, is usually sought for upon the extensor surface of the extremities, eczema frequently attacks the flexor aspect of the joints, where the former affection is never seen. While scabies affects chiefly the hands and genitals, and the mammary region in the female, the scratch-marks of pediculosis are commonly found across the upper portion of the back and shoulders, and about the loins and hips. Chromophytosis occurs only upon the trunk and upper extremities, while trichophytosis, although common upon the scalp in children, is never found in that locality in adult life. Such peculiarities of localization, it is needless to say, are important diagnostic features of these affections. In like manner we find favorite localities for certain forms of cutaneous syphilis, although no portion of the integument is exempt from manifestations of this disease. The earliest hyperæmic macules are commonly seen upon the abdomen, upon the lateral aspects of the trunk, and upon the inner portion of the arms and thighs. They are most distinct where the skin is thin and delicate. The papules so common in early syphilis are frequently well marked upon the forehead, the back of the neck, the palms, and the soles, in addition to their being disseminated over the trunk and extremities. The early pustular syphilide has a somewhat similar distribution. It is apt to be abundant on the lower extremities, and in some cases pustules form upon the glans and the sheath of the penis. All of the early eruptions of syphilis are disseminate in character. They are sometimes scattered over the body from head to foot, but the individual lesions do not coalesce and form patches of a circular form, as is the case with the later lesions. In late syphilis, i. e., in the eruptions which occur after the first year of the disease, we find that the lesions are no longer disseminated, not always symmetrical, but grouped together upon a limited portion of the body, and with a marked disposition to a circular or crescentic arrangement.

Polymorphism, or the coexistence of two or more of the elementary lesions in the same eruption, is quite common in cutaneous syphilis, but, as it is also a peculiarity of acne, scabies, and other non-syphilitic affections, it is a point of little diagnostic value.

Much has been written and said respecting the color of syphilitic eruptions. Every student has heard that they are copper-colored, and I would not dare assert that they are not. But I can assure you that their fancied resemblance to copper, as regards color, will never aid you to any extent in making a diagnosis. There is a marked difference between the hue of the early and that of the late lesions, and the former usually undergo a change from a yellowish-red to a brownish-red within the space of a few weeks, and sometimes leave a dark stain after they have disappeared. The color of lean ham is better suited for comparison with certain syphilides than that of copper; but, of the various characteristic features of syphilitic eruptions, the color is one of the least important from a diagnostic point of view. Some have claimed a characteristic odor for syphilis, as well for other skin affections.

The scales which sometimes form upon syphilitic papules and tubercles are usually quite thin and adherent. They are always disproportionate to the amount of infiltration beneath, as compared with the scales of ordinary psoriasis. When crusts form, as they frequently do in late syphilis, they are usually thick, roughened, and of a greenish-black hue. By a gradual increase from below, they sometimes assume the appearance of a flattened cone or that of an oyster-shell. Syphilitic ulcers are usually circular, except where two or more have coalesced, and their borders are usually sharply cut. There is frequently a marked tendency of the ulcerative process to extend into the healthy tissue on one side, while healing is taking place upon the opposite side and at the central portion of the ulcer. This serpiginous tendency often results in a characteristic "horseshoe" form of ulcer.

Finally, let me call your attention to a very important diagnostic feature of all syphilitic eruptions, viz., the absence of pain and itching. Itching is so marked a feature of many skin affections that, with a view to diagnosis, it is a very good plan to make a grand division of skin diseases into the two following classes: those which cause itching, and those which do not. There are some affections in which the itching is moderate and occurs only at certain times, and it is evident that these must be recognized upon some other basis. It is safe to decide, however, when you are in doubt respecting a case of skin disease, that, if the eruption never gives rise to itching, the case is not one of eczema. On the contrary, if there is severe itching, the eruption is not syphilitic in its nature. I frequently find that students who have taken an interest in the clinical study of cases of cutaneous syphilis are inclined to doubt the truth of the statement that syphilitic eruptions do not cause itching. Some have triumphantly called my attention to cases of early disseminated eruptions which, according to the statement of the patients, did itch severely. Now, gentlemen, this is another illustration of the folly of depending upon the statement of the patient respecting a matter which we can determine with our own eyes. It is never necessary to ask a patient if an eruption itches. If it does itch, the patient, unless paralyzed, will scratch, and, if he has finger-nails, they will leave their marks; and all that we have to do, in order to determine whether the eruption is itchy or not, is simply to look for these scratch-marks. In the case of these alleged itching syphilitic eruptions, the patients made a mistake in stating that the eruption itched, when in fact it was the sound portions of skin that itched, as was readily proven by observing the locality of the scratch-marks. Do you ask what made the skin itch in these cases? Because these patients, like thousands of others of their class, suffered not only from syphilis but also from lice.

◆

Editorials.

THE MARINE-HOSPITAL SERVICE.

We venture to say that in no branch of public medical service in this country have such great advances been made during the past decade as in the administration of the means provided by the Government for the care of the sick in the mercantile marine. Such progress argues not that the marine-hospital service towers above those of the army and of the navy, or above that of the quasi-public civil hospitals; but that what was true of it before was not, to anything like the same extent, true of them—that its condition was extremely inefficient. We are led to these remarks by a very interesting account of the origin, rise, and present state of the system by the Supervising Surgeon-General, Dr. John B. Hamilton, reprinted from "Appletons' Annual Cyclopædia," 1879.

It seems that in colonial times our seamen were taxed for the support of the Greenwich Hospital. Before the close of the Revolutionary War, the Commonwealth of Virginia, doubtless taking the cue from the British Government, established a system by which all seamen and marines in the State were made to pay "hospital money," in return for which they were entitled, when sick, to be taken care of at a hospital in the town of Washington, in Norfolk County. In 1798 a bill was passed in Congress, by which this system was virtually extended to the whole country, but in a very crude way. Out of this and additional acts of Congress, from time to time, grew the very imperfect hospital service that existed up to about ten years ago. For a time, the tax collected within any one State was expended in such State alone, although the States of New Hampshire, Massachusetts, Rhode Island, and Connecticut seem to have contributed jointly to the support of a hospital established at the Charlestown Navy-yard. At that time the seamen of the navy and those of merchantmen were alike taxed for the support of a common hospital service. Provision was made for the relief of our sick seamen in foreign ports, and an American marine hospital was established at New Orleans while that city was yet under Spanish rule.

The system was never very efficient, however. It was unsymmetrical and without a head. Things might chance to be well done at one port, for a time at least; but those charged with carrying out the plan at other places felt under no obligation to profit by the lesson, even if they ever had the opportunity of learning it. Money was spent on hospitals at points where they had never been needed, while at some of the larger ports there were none, and the service had to be carried on by the contract system—the sick seamen being sent to the civil hospitals, and their care and maintenance paid for at a specified rate. The great port of New York, for instance, was without a marine hospital until last year. To be sure, no great hardship resulted here, for by contracts with the New York Hospital and the Brooklyn City Hospital the sailors were well cared for at small expense. In some ports, however, contracts had to be made with hospitals of decidedly lower standing, or even with individuals: in one instance, admission to the almshouse was all that poor Jack got in return for his "hospital money."

There was no lack of attempts to improve the service from time to time, but they generally failed even to attain temporary ends. Congress was dilatory in acting upon petitions, suggestions, reports of committees, and the like; and indeed that much-abused body must often have been at a loss to know what was for the good of the service. The work had simply grown beyond the scope of the machinery originally devoted to it. In 1849, Dr. Thomas O. Edwards, of Lancaster, Ohio, and Dr. George B. Loring, of the Chelsea Marine Hospital, inspected the hospitals then in use or in course of building, and reported to Congress upon them and upon the hospital fund. They fully brought out the shortcomings of the system, or rather the lack of system, and their recommendations, although not adopted at the time, foreshadowed and doubtless paved the way for the very radical changes that have been wrought within the past few years.

In 1870, the service was systematized under the direction of the late Dr. John M. Woodworth, Dr. Hamilton's predecessor. Since that time the work has been carried on in the main by an organized staff of medical officers, consisting of a supervising surgeon-general, a medical purveyor, surgeons, passed assistant surgeons, and assistant surgeons. At ports where the service is not large enough to warrant the assignment of one of these regular officers, a private physician is employed, with the designation of "acting assistant surgeon." Appointments on the staff are made only after thorough and rigid examination. An out-patient service has been established for the relief of those not sick enough to require hospital treatment, and ambulances are furnished at all the principal ports. The services of members of the staff are at the disposal of any master, owner, or agent of any United States vessel in the matter of examining into the physical condition of persons offering to ship as sailors; and, according to the new pilot rules adopted by the Board of Supervising Inspectors of the steamboat-inspection service, no pilot can take out a license without a certificate from a medical officer of the marine-hospital service that he suffers from no defect of vision.

Such an organization, with its *esprit de corps*, its members holding their places by virtue of merit alone, under the direction of so competent a chief as we judge Dr. Hamilton to be, may safely be looked to to keep the marine-hospital service fairly abreast with those of the army and the navy.

◆

Reviews and Literary Notes.

A Practical Treatise on Tumors of the Mammary Gland: Embracing their Histology, Pathology, Diagnosis, and Treatment. By SAMUEL W. GROSS, A. M., M. D., Surgeon to, and Lecturer on Clinical Surgery in, the Jefferson Medical College Hospital and the Philadelphia Hospital, etc. Illustrated by 29 engravings. New York: D. Appleton & Co., 1880. Pp. x–246.

IT is with a sense of satisfaction that, in these days when so many comparatively worthless medical publications are crowded upon the notice of the profession (*and the public*), we meet with a book showing hard work, high attainments, and a truly scientific purpose. Somebody has said that some books are written *from* practice and others *for* practice. The work now under consideration belongs to the former class, and the author has been exceptionally fortunate in being able to command the large amount of clinical material upon which it is founded—sixty-five cases of cysts and nine hundred and two of neoplasms, the nature of which has been confirmed by the microscope.

To study these as they should be studied, to investigate their minute structure and general pathology, and to apply the principles fairly deducible from their anatomy and history to their differential diagnosis and treatment, is a work requiring special qualifications not generally found in the practicing surgeon of the day.

We know of no book in the English language which attempts to cover the ground covered by this one—indeed, the author seems to be the first who has sought to handle the whole subject of mammary tumors in one systematic treatise. How he has succeeded will best be seen by a study of the book itself. In the early chapters the classification and relative frequency of the various tumors, their evolution and transformations, and their etiology are dealt with; then each class is studied in a separate chapter, in which the result of the author's work is compared with that of others, and the general conclusions are drawn which give to the book its great practical value; finally, a chapter is devoted to diagnosis, one to treatment, and one to the tumors in the mammary gland of the male.

As the writer himself points out, not the least important part of the work is that in which the view is sought to be maintained, by an abundant array of facts, that carcinoma may be permanently relieved by thorough operations practiced in the early stage of its evolution. He is "aware that this doctrine will not meet with general acceptance on the part of those purely mechanical surgeons who believe that freedom from recurrence denotes an innocent neoplasm. In every case of final recovery mentioned in this treatise, however, the diagnosis was based upon minute examinations conducted by trustworthy microscopists, whose reports have been utilized in this inquiry to the exclusion of the descriptions of the early writers on carcinoma."

Traité d'Anesthésie Chirurgicale, contenant la Description et les Applications de la Méthode Anesthésique de M. Paul Bert. Par le Docteur J. B. ROTTENSTEIN, Membre de l'Académie Leopoldina Carolina, de la Société Odontologique de New-York, etc. Avec 41 Figures intercalées dans le Texte. Paris: Germer Baillière et Cie., 1880. Pp. x–428.

IN this large and complete work the whole history of surgical anæsthesia is attempted, from the time of the ancients down, through the early struggles in this country, to the latest method, that of M. Paul Bert. The book is historical, chemical, and physiological, dealing with each branch of the subject freely and entertainingly. The method of Bert, to which so much of the book is devoted, consists in the administration of laughing-gas while both patient and surgeons are confined in a close chamber and subjected to increased atmospheric pressure. The results of this procedure, as given by the author, are said to be more brilliant and satisfactory than any heretofore known in anæsthesia; nevertheless, we imagine it will be some time before it will be universally adopted. Should any one doubt this prediction, we would advise him to take a glance at the figure representing an operating-room on wheels, provided with force-pump, stop-cocks, gauges, and bull's-eyes, and highly suggestive of a luxurious submarine pleasure yacht, *à la* Jules Verne.

The book is well written, albeit a little matter sometimes covers a good many pages; and we notice only a few errors, such as a foreigner is liable to fall into in speaking of the United States. The author, for example, goes out of his way to state that Horace Wells lived in "Hartford, Vermont"; and among *les principales sommités chirurgicales de l'Amérique du Nord* we find the name of "Hamilton Fordyce Barker."

Fracture of the Patella. A Study of One Hundred and Twenty-seven Cases. By FRANK H. HAMILTON, A. M., M. D., LL. D., etc. New York: Charles L. Bermingham & Co., 1880. Pp. 106.

OF the one hundred and six pages which compose this little brochure, eighty-one are taken up with reports of cases which have occurred in the practice of the author or in the wards of Bellevue Hospital, and have previously been published in the "Medical Gazette."

The third chapter is a summary of what has gone before, and the fourth and last is "the substance of two lectures on fracture of the patella delivered at Bellevue Hospital." The book has just that value that so large a number of well-reported cases necessarily possesses.

The Surgery, Surgical Pathology, and Surgical Anatomy of the Female Pelvic Organs, in a Series of Plates taken from Nature, with Commentaries, Notes, and Cases. By HENRY SAVAGE, M. D. (London), F. R. C. S. E., one of the Consulting Medical Officers of the Samaritan Hospital for Women. Third edition, revised and greatly extended. Thirty-two plates and twenty-two wood-engravings, with special illustrations of the operations on vesico-vaginal fistula, ovariotomy, and perineal operations. New York: William Wood & Co., 1880. Pp. 119.

THIS volume forms a part of "Wood's Library of Standard Medical Authors" for the current year, and the publishers are to be congratulated on the sale that the series must have reached to justify the issue of this work at the low price charged. The plates are not colored, and some of them are slightly reduced in size; nevertheless, we consider them rather better done than those of the English quarto edition. The American volume is indeed the handier of the two, and in every way the more attractive. The third English edition was published in 1876, and the work is so well known as scarcely to call for an extended notice at the present time.

L'Année Médicale (deuxième année), 1879. Résumé des progrès réalisés dans les sciences médicales. Publié sous la direction du Dr. BOURNEVILLE. Paris: E. Plon et Cie., 1880. Sm. 8vo., pp. vi–396.

THIS is the second volume of "L'Année Médicale." As was the plan of the first volume, it takes up the different branches of medical science separately, and under each head notices the important advances made in that special department. The reports are for the most part terse and clear, giving the general reader a fair idea of ultimate conclusions and indicating to those specially interested where the details may be found. In these days of prolific writing, such publications are a necessity.

BOOKS AND PAMPHLETS RECEIVED.—Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. 1: A–Berliński. With a List of Abbreviations of Titles of Periodicals Indexed. Washington: Government Printing-Office, 1880. 4to, pp. vi–126–888. [From Surgeon J. S. Billings, U. S. Army.] ═══ The Brain as an Organ of Mind. By H. Charlton Bastian, M. A., M. D., F. R. S., Professor of Pathological Anatomy and of Clinical Medicine in University College, London, etc. With one hundred and eighty-four illustrations. New York: D. Appleton & Co., 1880. Pp. xi–708. ═══ On the Bile, Jaundice, and Bilious Diseases. By J. Wickham Legg, Fellow of the Royal College of Physicians of London, etc. New York: D. Appleton & Co., 1880. Pp. xvi–719. ═══ Atlas of Skin Diseases. By Louis A. Duhring, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part VII. Eczema (Pustulosum), Impetigo Contagiosa, Syphiloderma (Papulosum), Lupus Vulgaris. Philadelphia: J. B. Lippincott & Co., 1880. 4to, pp. 8, and colored plates. ═══ The Care of the Insane and their Legal Control. By John Charles Bucknill, M. D., Lond., F. R. S., Fellow and Censor of the Royal College of Physicians, etc. London: Macmillan & Co., 1880. Pp. xl–133. [Price $1.00.] ═══ A Treatise on Common Forms of Functional Nervous Diseases. By L. Putzel, M. D., Physician to the Clinic for Nervous Diseases, Bellevue Hospital Out-door Department, etc. New York: William Wood & Co., 1880. Pp. vi–256. [Wood's Library of Standard Medical Authors.] ═══ Aforismos de Dermatología Práctica, por el Excmo. Sr.

Dr. D. José Eugenio Olavide, Médico del Hospital de San Juan de Dios, etc. Madrid: Oficina Tipográfica del Hospicio, 1880. Pp. 49. ═════ What to Do First in Accidents or Poisoning. By Charles W. Dulles, M. D., Surgical Registrar to the Hospital of the University of Pennsylvania, etc. Philadelphia: Presley Blakiston, 1880. Small 8vo, pp. 64. ═════ The Skin in Health and Disease. By L. Duncan Bulkley, M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-Patient Department, etc. Philadelphia: Presley Blakiston, 1880. 12mo, pp. 148. [American Health Primers.] ═════ The Western Farmer of America. By Augustus Mongredien, author of "Free Trade and English Commerce." London: Cassell, Petter, Galpin & Co. Pp. 30. [Price 3d.] ═════ Medical Science in Conflict with Materialism. By Eugene Grissom, M. D., LL. D. Address delivered before the Medical Society of North Carolina, May 13, 1880. ═════ Transactions of the Medical Association of Georgia. Thirty-first annual session, 1880. Atlanta: James P. Harrison & Co., 1880. Pp. 251. ═════ Transactions of the Medical Association of the State of Missouri....1880. St. Louis: Davis & Freegard, 1880. Pp. 164. ═════ Transactions of the State Medical Society of Arkansas at its fifth annual session. Little Rock: James Mitchell, 1880. Pp. 120. ═════ Medical Department of Willamette University. Fifteenth Annual Announcement, 1880. ═════ Report of the Bureau of Organization, Registration, and Statistics to the American Institute of Homœopathy, at its session held in Milwaukee, June 15, 1880. ═════ The Vinum Nutrio-Phosphaticum. The Orthozoic Chemical Association. ═════ The Etiology, or Nature, Causes, etc., of Diphtheria; an Address delivered before the N. H. Medical Society....By T. J. W. Pray, M. D., of Dover, President of the Society. Concord: Evans & Sleeper, 1880. Pp. 49. [Reprint.—From the author.] ═════ Service, United States Marine Hospital. By John B. Hamilton, Supervising Surgeon-General. [Reprint from "Appletons' Annual Cyclopædia," 1879. —From the author.] ═════ The Yellow-Fever Quarantine of the Future, etc. By Henry Fraser Campbell, A. M., M. D., Augusta, Ga. [Reprint. —From the author.] ═════ I Clisteri Nutritivi e l'Alimentazione per il Retto. Dott. Michele Michelacci. [Reprint.] ═════ Ophthalmic Operations, etc. By A. S. Campbell, M. D., Augusta, Ga. [Reprint.—From the author.] ═════ Remarks on Abdominal Surgery, etc. By F. J. Lutz, A. M., M. D., St. Louis, Mo. [Reprint.] ═════ Diagnosis of Malignant Tumors of the Upper Jaw in Youth. By L. McLane Tiffany, M. D., etc. [Reprint.—From the author.] ═════ The Use of the Sphygmograph in Practice. By Abram B. Arnold, M. D., etc., Baltimore. [Reprint.] ═════ Pregnancy-Vomiting. By J. Marion Sims, M. D., LL. D. [Reprint.] ═════ The Foramina of Monro, etc. By Burt G. Wilder, M. D. [Reprint.—From the author.] ═════ The Two Kinds of Vivisection—Sentisection and Callisection. By Burt G. Wilder, M. D. [Reprint.—From the author.] ═════ Exsection of the Lower End of the Femur. By J. W. Smith, M. D., of Charles City, Iowa. [Reprint.] ═════ Ueber den sogenannten schnellenden Finger (doigt à ressort). Von Dr. Carl Fieber, Docenten der Chirurgie an der Wiener Universität. [Reprint.] ═══ Anæsthesia by Ethyl Bromide. By H. Augustus Wilson, M. D., etc. Philadelphia. [Reprint.] ═══ Senile Obliteration of the Uterine Cervical Canal. By Henry F. Campbell, M. D., Augusta, Ga. [Reprint.] ═══ Report of the Indiana State Health Commission, Mortality Tables, etc. [Reprint.]

◆

Proceedings of Societies.

NEW YORK OBSTETRICAL SOCIETY.

A STATED meeting was held May 4, 1880, Dr. W. T. LUSK, President, in the chair.

VESICAL CALCULUS.—Dr. T. A. EMMET presented the fragments of a stone weighing four ounces, which he had broken up and removed from the bladder of a woman forty-four years of age, in December last. She had been treated for irritation of the bladder for four years, and stone had not been suspected, although it could be felt above the pubes. There was nothing especially interesting in the case, except as showing the advantage of removing stone through an opening in the base of the bladder. The stone was encysted throughout, except along the base of the bladder, so that the mucous membrane in contact with it had been destroyed. Having broken up the stone with blunt-pointed scissors and washed out the bladder, Dr. Emmet smeared the interior of the organ with vaseline, which he thought had a good effect in protecting the parts and preventing phosphatic deposits which might have formed again upon the raw surface. The bladder was washed out several times a day, and she was under treatment for nearly two months before being discharged. In April last she returned for examination. She had regained her health, and was then weighing twenty pounds more than at the time of the operation. The opening into the base of the bladder was left open, to secure drainage and rest to the bladder. The conditions were now favorable for closing the bladder. In response to an inquiry by Dr. MANN, Dr. Emmet could not state the capacity of the bladder, but thought it was reduced one half from thickening of its walls. He remarked further that the nucleus of the calculus was a small, hard stone. The patient's urine had dribbled from her for a long time before the operation. ═══ Dr. H. J. GARRIGUES stated that he had been kindly permitted to examine the patient, and had found that, the nucleus having been drawn out before most of the shell, the whole interior of the bladder felt like a stony cavity. ═══ Some remarks followed in regard to the danger of removing stone through the urethra, an operation which Dr. Emmet could see no reason for ever attempting, because laceration would take place sometimes, notwithstanding the greatest care. ═══ Dr. A. J. C. SKENE thought that if the operation of crushing and removing the stone through the urethra were practiced as recommended by Dr. Bigelow, of Boston, no evil results would occur.

PRURITUS VULVÆ.—Dr. W. M. CHAMBERLAIN related a case in which, upon first inspection, he had found the labia minora and part of the labia majora also, from the mons Veneris to the fourchette, invested with dense, parchment-like skin, having a granular surface—like shagreen; marked with many cicatrices, from wounds made by scratching. In such a condition alteratives and sedatives seemed to promise no relief. Accordingly, he tried the—to him—novel method of removing this tissue by vesication with cantharidal collodion. This was thoroughly done, and the raw surface was dressed with mercurial ointment. The treatment was severe, but it had resulted in securing a smooth, soft surface, and in the entire cure of the pruritus.=====Dr. F. P. FOSTER stated that it was a recognized treatment in cases of eczema of various parts of the body, where too great an area was not involved, and where infiltration was a marked feature, to apply irritants over the surface. He did not think he had ever made such applications for that purpose to a mucous surface.=====Dr. SKENE mentioned his personal experience with a similar case to that of Dr. Chamberlain, which had failed to be improved by various local applications. Iodine and carbolic acid, in equal parts, were applied by means of an atomizer, using the strongest air-pressure he could command. More effect was produced than was anticipated, so that there was almost a complete exfoliation of the mucous membrane and integument, leaving a rather tender and raw-looking surface, which healed after a time, and the patient was very much improved.

CIRCUMCISION FOR THE RELIEF OF CEREBRAL SYMPTOMS.—Dr. CHAMBERLAIN mentioned the case of a boy, two and a half years old, who had frequent epileptiform convulsions—sometimes three in a day. The function of the bowels was very much disturbed, diarrhœa and constipation succeeding each other. Long and faithful attention to all matters of diet, dress, and hygiene failed to regulate their action. Peptics, iron, and aromatics were of little use. The abdomen was tumid; the muscular development and the power of the lower limbs were deficient. As the child had suffered eight months before with an acute otitis media, with strabismus, unequal dilatation of the pupils, etc., the idea of central nervous lesions seemed probable. Bromide of potassium and chloral, singly and combined, had no power to suspend the convulsions. The preputial orifice was rather contracted, but urination was free and the urine was normal. Finally, Dr. Chamberlain determined to circumcise, although without palpable indications for so doing. The internal preputial surface was found adherent over the entire extent of the glans—so firmly, that in places the mucous membrane of the glans itself was separated in its removal, while in others the mucous surface of the prepuce was left adherent. Separation was finally effected, and, after the primary swelling and soreness had abated (three or four days after the operation), the convulsions ceased, and the function of the bowels became natural. Three weeks had now passed without a convulsion, and very great improvement in the child's general condition was apparent.

PUERPERAL INSANITY.—Dr. E. NOEGGERATH completed the history of the case of puerperal insanity, or rather melancholia, complicated with ovarian cyst, to which he had previously called the attention of the society. He first reported the case about one week after the operation for the removal of the cyst, which was followed by the patient becoming perfectly rational. As the cyst contained pus, he had given it as his opinion that the sudden recovery was due to the withdrawal of decomposing matter from the system. Two days after he reported the case, the patient had a relapse and was as insane as before. Dr. Watts had expressed it as his opinion that the improvement was due to the chloroform which had been used as the anæsthetic during the operation; and, although Dr. Noeggerath did not think this possible, still, when the relapse occurred, he acted upon this suggestion and administered chloroform. The result was that she became as rational as before, and had remained so for the past five weeks. ═══ Dr. Foster remarked that he could give a theoretical explanation of what had occurred in Dr. Noeggerath's case. It was a fact that patients with puerperal insanity, when convalescent, however slowly, might very often be restored immediately, or within a few hours, by some intense mental shock, and it was possible that an analogous effect was produced by the process of anæsthetization. ═══ The President called attention to the extraordinary improvement in cases of insanity immediately following transfusion. He believed, however, that relapses occurred. ═══ Dr. W. M. Polk mentioned a case of suppression of menstruation in the early months of insanity. Menstruation afterward returned. One day the patient shot herself just below the left nipple, the ball lodging opposite the lower end of the left scapula. Pneumonic consolidation was developed, which afterward ended in complete resolution, and the patient became perfectly sane. ═══ Dr. Watts said he had seen cases of pronounced melancholia relieved by long sleep (eighteen to twenty-four hours) induced by narcotics, and it had occurred to him that the improvement in this case might be due to the chloroform rather than to the operation.

Peritonitis without Characteristic Symptoms.—Dr. Emmet reported a fatal case of this kind, which had occurred in his private practice. The patient was thirty-nine years of age, and had given birth to two children. The last child had been born some nineteen years after a very severe labor, from the effects of which the mother had never recovered. Menstruation had become prolonged and profuse, and the patient had given up all hope of ever getting well. Examination revealed the uterus anteverted and enlarged, with the width of the fundus out of proportion to the length of the organ. The original cause of the difficulty evidently had been a double laceration of the cervix, extending on the right side beyond the vaginal junction, and this injury had set up an inflammation in the folds of the broad ligament on that side. The patient was under preparatory treatment for an operation to restore the cervix, during which time a sponge-tent was introduced for the purpose of dilating the uterine canal, in order to ascertain, if possible, the cause of the excessive flow. After the tent had been removed, the curette-forceps was passed without detecting any growth. Then the uterus was washed out with warm water, and tincture of iodine was applied. Several days afterward the patient got up and imprudently walked about in her bare feet. A severe chill and an attack of cellulitis resulted. Within a week death occurred. Dr. Emmet believed that general peritonitis had existed for several days before death, and yet there was not a single symptom to point out positively the existence of the lesion. He considered, however, that the gravity of her case was indicated by the tone of her voice, which was startling from the fact that it was so clear and strong as to be in no keeping with her evident collapsed condition. At no time was the temperature above 103·5° F. in the vagina, until within a few hours of her death. Dr. Emmet inquired if it were possible that the peritonitis could have had a beginning and have run its course within the few hours that this high temperature existed. Some of the most extensive and fatal cases of peritonitis which he had ever seen had supervened upon, or had extended from, a previously existing pelvic cellulitis, giving no indication of its existence during life. Yet the most casual observer must have been impressed, from the obscurity of the symptoms and from the general appearance of these patients, that they were in danger, for it would appear as if they had been stricken in some unknown way, as the chief and sometimes all the characteristic symptoms of peritonitis would be wanting, or present only just before death. As these cases were always connected with a previous cellulitis, Dr. Emmet asked if the origin of such a peritonitis was a septic one; if blood-poisoning took place from the pelvic condition, as phlebitis did after child-birth; and if the presence of this poison in the circulation paralyzed sensation and ganglionic action. He called attention to the disposition on the part of some to blame the physician in charge in these obscure cases, when there was no indication of the character of the disease until within a short time before death. No post-mortem had been made in the case reported, as there was no doubt that general peritonitis existed, although it had not been evident until three or four hours before death.══Dr. A. Jacobi admitted that elevation of the temperature was a very important symptom, but he had long ago lost confidence in it as one of the main symptoms of peritonitis. He had seen a number of fatal cases of peritonitis with very little elevation of temperature almost up to the last minute of life.══Dr. Emmet wished to state it as his opinion that, the more malignant the form of peritonitis, the more certainly would every characteristic sign be absent, and that this was due to blood-poisoning.══Dr. Jacobi concurred in this opinion. He said it was not uncommon for sepsis to run its full course without a temperature above 101° or 102° F.══The President remarked that a similar condition obtained in some cases of puerperal fever, and cited a case that had occurred in his wards at the hospital.══Dr. Polk gave the history of a lady who had been confined about three weeks previous, and who had made, as far as could be judged, a complete recovery. Suddenly one night she went into a state of collapse; there was no fever and no pain. She remained in this condition three days, and then died. The autopsy revealed a small abscess in the left ovary, which had ruptured into the peritoneal cavity, giving rise to extensive congestion of the peritonæum, which was the cause of death. As bearing upon the possibility of a virulent substance masking the symptoms of peritonitis, Dr. Polk referred to a case which the President had seen in consultation with him at the hospital. The patient had an abdominal enlargement, but was otherwise perfectly healthy. The tumor was punctured with a new needle. In the afternoon of the same day some pain was developed, and the temperature rose to 103° F. The following day her temperature was 105°, and twenty-four hours afterward she developed facial erysipelas, and had intense pain all over the abdomen; she died on the fifth day. The autopsy showed lymphangeitis, extending into the broad ligaments, and the neighboring lymphatics contained a slight amount of exudation. The remaining surface of the peritonæum was congested. This patient had all the symptoms of peritonitis, and yet there was clearly septicæmia as the cause of both the lymphangeitis and the erysipelas.══Dr. Noeggerath cited cases illustrative of the fact that a very high temperature might exist in non-septic peritonitis, and still the patient be in good condition and suffer very little from it. He wished to call attention to a misnomer commonly used. Many alluded to pelvic peritonitis under the name of cellulitis. Cellulitis was an inflammation of the cellular tissue in and around the uterus. All the grave cases were peritonitis, and not cellulitis. The distinction was of importance from a clinical standpoint, for the prognosis and treatment in the two affections differed.══The President thought that most of the cases alluded to during the evening were cases of pelvic cellulitis.══Dr. Noeggerath said that, in septic peritonitis produced artificially, the bacteria traveled through the lymph-vessels, and in rare cases perforated the endothelium, and then passed into the peritonæum. If the uterus and peritonæum were examined in a woman dead of septic peritonitis, the disease would usually be found restricted to the veins, arteries, and lymphatics; the lymphatic spaces proper (the borders of which were of cellular tissue) would be found very little involved.

A STATED meeting was held May 18, 1880, Dr. W. T. LUSK, President, in the chair.

PRURITUS VULVÆ.—Dr. MACKENZIE remarked that, as the treatment of pruritus vulvæ had been discussed at the last meeting, he would give the plan of treatment which in his hands had yielded the best results. When a parchment-like membrane existed, he made local application of an ethereal solution of iodoform in the form of a spray. It produced no pain, and was very rapid in its action. He had tried the plan recommended by Dr. Skene at the last meeting, but without benefit.=====Dr. WARREN said he had used iodoform in an ointment in these cases, and that the results were more satisfactory than from anything else he had tried.

URETHRAL CARUNCLE.—Dr. JENKINS cited a case in which the patient was a woman twenty-five years of age, who complained of great pain after micturition. On examination, he found a urethral caruncle, which he removed. Finding that she still suffered pain, he explored the urethra farther, and found half a dozen more of these growths higher up in the canal: they were of the size of a pin's head. As many of them as possible were snipped off with a pair of scissors, and the others were destroyed with chemical agents; but she still had intense pain after urination, often lasting two or three hours. She was taken to Dr. Skene, who, after a careful examination, thought that all of the foreign growths had been removed, and regarded the case as one of congestion of the urethral canal, especially in its upper third. He recommended local treatment, which was carefully carried out for a month, but with only temporary benefit. The patient was now taken to Dr. Emmet, and by his permission was placed in the Woman's Hospital. Dr. Emmet concluded to open the urethra through the vagina, and found it apparently healthy, but, upon more careful examination, he detected several exceedingly small vascular excrescences, one of which had been divided by the incision, which was made parallel with the course of the urethra. After snipping these off and sewing up the canal, the patient made a rapid recovery, and was now entirely well. There was no fissure at the neck of the bladder and no vesical irritation.=====Dr. MUNDÉ said it was usual in operating for urethral caruncle to both excise the growth and cauterize its base. He had removed a number in this way, and none of them had returned.

INVERSION OF THE URETHRA.—The PRESIDENT made brief mention of a case of this sort which he had been invited to see by Dr. Janeway. Examination showed a bright red tumor projecting apparently from the urethral orifice, but which proved, on examination, to be really a complete inversion of the urethra itself. The patient was etherized and the mucous membrane was replaced. When the patient was last heard from, some four or five days after the operation, it was still in place.=====Dr. MUNDÉ related the history of a similar case, which he had seen about a year before at Mount Sinai Hospital. The inverted urethra was mistaken for an epithelioma, and preparations were made to remove it by means of the galvanic cautery; but a few days later, when the patient was placed upon the table for operation, it was found that the tumor had disappeared. Evidently the œdematous mucous membrane had sloughed off.

PELVIC HÆMATOCELE.—Dr. WATTS gave the history of a case that had been brought into his wards at the Roosevelt Hospital. The patient was a married woman, twenty-eight years of age. She suffered great pain, and had high fever, with a rapid, weak pulse. Up to the time of the attack she had been perfectly well. She was carrying a pail of coal up stairs, when she suddenly felt something give way within her. She had a good deal of pain, and was obliged to take to her bed. When Dr. Watts first saw her, percussion revealed dullness above the pubes. With the finger in the vagina, it was very difficult to reach the os, which was crowded up behind the pubes. Behind the uterus was a dense, hard mass, which seemed to run into the broad ligament. This was recognized as an hæmatocele. The pain was relieved with morphine, and the patient did well for about two weeks, when she had a chilly feeling and her temperature ran up; she seemed to be sinking. The mass had become smaller, the uterus had descended, and behind the organ distinct fluctuation was felt. Sepsis was thought to be developing. Aspiration resulted in the withdrawal of a teaspoonful of blood, which was entirely free from odor at the time, but in fifteen minutes became exceedingly foul. For ten days the woman improved, and the hardened mass grew smaller. She was now suddenly seized with pain in her ear, and an abscess developed, which afterward discharged freely. She had another attack of violent pain in the abdomen, and upon examination it was found that the first mass had been replaced by one extending above the level of the umbilicus. This was exquisitely sensitive to the touch to the right of the umbilicus. It was supposed that the patient had another hæmatocele, but vaginal examination revealed nothing whatever. The walls of the vagina were soft, and the remains of the old hæmatocele could be felt, but no new exudation. For five or six days the only noticeable change was the increased prominence of the mass, but there was no increase in its area. At the end of this time the skin became a little bluish, and two days afterward the mass was distinctly fluctuating. Poultices were applied. The abdomen became tympanitic, and there was distinct crepitus. When the needle of the aspirator was introduced there was a puff of fetid air, followed by the discharge of a sanious fluid. An incision was now made, which gave exit to a small quantity of fetid pus. On the day following the operation the patient's condition was bad. The cavity was washed out at regular intervals with carbolized water; healthy pus was now discharged, and the woman's condition improved. Dr. Watts thought the abscess which he opened was the breaking down of the upper edge of the original hæmatocele, without any further pouring out of blood, though he did not feel certain of this. In this connection, the question arose whether it was best to puncture an hæmatocele or not. The speaker had done so on several occasions without the slightest effect, but in the instance under consideration the removal of a very small quantity of fluid was followed by marked improvement. Another question arose, and that was, whether the abscess in the ear was of septic origin. ═══ Dr. MUNDÉ remarked that it was not alone in pelvic hæmatocele that evacuation of a small quantity of fluid with an aspirator might sometimes afford much relief. He had seen great improvement after such evacuation in cases of obscure abscess of the broad ligament. ═══ Dr. FOSTER remarked that he should feel quite certain, from the history given, that the case was one of extra-peritoneal hæmatocele, and that the gas that escaped when the abscess was opened did not proceed from the intestines, but was the result of decomposition. The second attack was perhaps due to an additional escape of blood at the upper part of the swelling. He would not expect to find tangible evidence of this second escape of blood upon examination per vaginam. ═══ The PRESIDENT asked if an extra-peritoneal hæmatocele of that size could occur suddenly without terminating fatally as a consequence of the sudden stripping up of the peritonæum. He thought the patient would at least have had graver symptoms than those described by Dr. Watts, if such were the case. ═══ Dr. WATTS thought the position of the uterus, as determined when the patient was first seen, was opposed to the idea of an extra-peritoneal effusion. ═══ Dr. FOSTER did not consider it necessary to infer that the amount of extravasation of blood corresponded with the area of hardness which was felt some time afterward. He thought it reasonable to suppose that a comparatively small extravasation might give rise to a much more extensive phlegmon. —— Dr. Chamberlain suggested that the abscess might be pyæmic. —— Dr. Watts remarked that he had excluded that because there was so much blood. He thought the abscess was outside the peritonæum because he could get behind its border with his finger, but he could not see how the original hæmatocele could have been extra-peritoneal with the uterus in the position in which he found it.

Circumcision for Cerebral Symptoms.—Dr. Chamberlain gave some additional information in regard to the boy whom he had spoken of at the last meeting as having been circumcised. After four weeks of immunity, he was now having fits very badly, the relapse being coincident with the occurrence of obstinate constipation and a purulent discharge from the bowels.

Carcinoma of the Uterus.—Dr. Mundé gave the history of a case of carcinoma of the uterus which presented some interesting points. In December last he was asked by Dr. McLaury to see the patient, a woman about thirty years of age. Upon examination, he found a cauliflower-growth, which bled profusely when touched. He endeavored to remove it with a galvanic cautery, but, the apparatus not working properly, he accomplished this with a pair of scissors, a knife, and a sharp curette, removing the whole vaginal portion of the cervix and excavating up to the os internum. The surface was then cauterized with chloride of zinc. As the uterus was found to be freely movable and could easily be drawn down to the vulva, Dr. Mundé considered the case one for complete removal of the organ, and recommended its performance as soon as the wound was healed. Nothing further was heard of the case for over three months, when Dr. Mundé saw the patient in consultation with Dr. McLaury and Dr. Griswold. The disease had now spread, the uterus was fixed, and half way up the urethra, in the vagina, was a tumor of the size of a small turnip, evidently epitheliomatous. It had no apparent connection with the cervix. It was removed with the galvanic cautery, and the cervix was again scraped. An interesting question was, what was the connection, if any, between the second growth and the first. Dr. Mundé considered it a strange sort of metastasis, and that of course it invalidated any idea of radical operation.

◆

Reports on the Progress of Medicine.

QUARTERLY REPORT ON OBSTETRICS AND GYNÆCOLOGY.

No. III.

By FRANK P. FOSTER, M. D.,
PHYSICIAN FOR DISEASES OF WOMEN TO THE OUT-PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL.

Obstetrics.

1. Playfair, W. S.—The teaching of obstetric medicine. "Brit. Med. Jour.," Aug. 14, 1880.
2. Atthill, L., and Smith, H.—Lying-in hospitals. "Brit. Med. Jour.," July 10, 1880.

3. Harris, R. P.—Do close adhesions between the uterus and abdominal wall, the uterus, or its appendages, and adjacent parts within the pelvis, and between the uterus and omentum, complicate subsesequent gestation and parturition? "Amer. Jour. Obstet.," July, 1880.
4. Möbius, P. J.—Ueber die Anwendung der Electricität in der Geburtshülfe und Gynäkologie. "Deutsche med. Woch.," June 26, 1880.
5. M'Clintock, A. H.—Acute hydramnios. [Dublin Obstet. Soc.] "Dublin Jour. Med. Sci.," June, 1880.
6. Sims, J. M.—Pregnancy-vomiting. "Arch. Med.," June, 1880.
7. Sawyer, E. W.—The chances of living of a seven-months' fœtus, and of an eight-months' fœtus. "Chicago Med. Review," June 20, 1880.
8. Parvin, T.—The third stage of abortion: its management, with retention of placenta and membranes. "Obstet. Gaz.," July, 1880.
9. Stevens, E. B.—Remarks on the management of abortions. "Obstet. Gaz.," July, 1880.
10. Ruge, C.—Ueber die Contraction des Uterus in anatomischer und klinischer Beziehung. "Zeitschr. f. Geb. und Gynäk.," v, 2, 1880.
11. Hart, D. B.—On the alleged synclitic movement of the fœtal head. "Edinb. Med. Jour.," July, 1880.
12. Boisliniere.—Anæsthetics in labor. [St. Louis Obstet. and Gynæcol. Soc.] "St. Louis Courier of Med.," July, 1880.
13. Mossman, B. E.—Prophylactic dilatation of the vaginal orifice during labor, as a prevention of laceration of the perinæum. "Am. Jour. Obstet.," July, 1880.
14. Lusk, W. T.—The justo-minor pelvis, etc. "Trans. Am. Gyn. Soc.," vol. iv, 1879.
15. ———.—De la version externe. "Jour. des Sci. Méd. de Louvain," June, 1880.
16. Kucher, J.—On external examination and external version during pregnancy and labor. "Med. Gaz.," Aug. 7, 1880.
17. Braun, G.—Ueber Tarnier's forceps. "Wien. med. Wochenschr.," June, 12, 19, 1880.
18. Taylor, I. E.—The early application of the forceps in the first stage of natural labor. "Trans. Am. Gyn. Soc.," vol. iv, 1879.
19. Kinkead, R. J.—Craniotomy and its alternatives—Cæsarean section, laparo-elytrotomy, and Porro's operation. [Dublin Obstet. Soc.] "Dublin Jour. Med. Sci.," May, 1880.
20. Richardson, W. L.—A new method of performing decapitation. "Trans. Am. Gyn. Soc.," vol. iv, 1879.
21. Schauta, F.—Zur Lehre von der Dekapitation. "Wien. med. Wochenschr.," Aug. 7, 1880.
22. Harris, R. P.—The results of the first fifty cases of "Cæsarean ovaro-hysterectomy," 1869–'80. "Am. Jour. Med. Sci.," July, 1880.
23. Veit, G.—Kaiserschnitt mit Excision des Gebärmutterkörpers. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
24. Felsenreich, T.—Sectio cæsarea nach E. Porro, mit Erfolg für Mutter und Kind. "Wien. med. Woch.," June 26, 1880.
25. Taylor, I. E.—Gastro-hysterectomy, or the recent modification of the Cæsarean section by Dr. Porro. "Am. Jour. Med. Sci.," July, 1880.
26. Demaison, V.—Hystéro-ovariotomie césarienne. "Gaz. Hebd.," Aug. 13, 1880.
27. Frommel, R.—Zur Aetiologie und Therapie der Uterusruptur. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
28. Matchett, W. H.—Report of a case of inversion of the uterus. "Obstet. Gaz.," June, 1880.

29. Murphy, J.—Puerperal eclampsia. "Lancet," June 12, 1880.
30. Masini, A.—Osservazioni cliniche sopra quattro casi di eclampsia. "Lo Sperimentale," April, 1880.
31. Clark, C. C. P.—The treatment of puerperal eclampsia by morphine. "Am. Jour. Obstet.," July, 1880.
32. Goebt, H.—Note on a rare form of uterine hæmorrhage. "Brit. Med. Jour.," July 3, 1880.
33. Engelmann, G. J.—The treatment of post-partum hæmorrhage. "St. Louis Med. and Surg. Jour.," Aug. 5, 1880.
34. Chassagny.—Du double ballon dans les hémorrhagies post partum. "Lyon Méd.," May 9, 1880.
35. Solares, F. V.—De algunos cuidados que necesitan los recien nacidos. "Rev. de Med. y Cir. Práct.," Aug. 7, 1880.
36. Etheridge, J. H.—On the management of the uterus after parturition. "Chicago Med. Jour. and Exam.," Aug., 1880.
37. Sinclair, A. D.—Measurements of the uterine cavity in childbed. "Trans. Am. Gyn. Soc.," vol. iv, 1879.
38. Ahlfeld.—Was hat die Zeitweise Suspension der Hebammen als Prophylaktikum bei Puerperalerkrankungen für eine Bedeutung? "Centralbl. f. Gynäk.," July 31, 1880.
39. Bernardy, E. P.—The recurrence of puerperal fever. "Am. Jour. Obstet.," July, 1880.
40. Bell, C.—Cases of puerperal fever treated by the muriated tincture of iron. "Edinb. Med. Jour.," July, 1880.
41. Runge, M.—Bemerkungen über eine Puerperalfieberepidemie in der geburtshülflichen Klinik der Charité. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
42. Hofmeier, M.—Ueber den Werth prophylaktischer Uterusausspülungen gleich nach der Geburt. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
43. Küstner.—Die permanente Scheidenirrigation, eine Methode streng antiseptischer Behandlung der Genitalwunden der Frau. "Centralbl. f. Gynäk.," July 31, 1880.
44. Frommel, R.—Ueble zufälle bei Scheidenirrigationen Kreissender. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
45. Jenks, E. W.—The treatment of puerperal septicæmia by intra-uterine injections. "Trans. Am. Gyn. Soc.," vol. iv, 1879.
46. Chamberlin, D. P.—Sub-peritoneal puerperal hæmatocele. "Toledo Med. and Surg. Jour.," May, 1880.
47. Barnes, F.—A clinical note on phlegmasia dolens. "Brit. Med. Jour.," June 19, 1880.
48. Monoyer.—Rupture spontanée du cordon ombilical par la chute du fœtus. [Soc. des Sci. Méd. de Lyon.] "Lyon Méd.," May 23, 1880.
49. Dohrn, R.—Ein neuer Nabelverband. "Centralbl. f. Gynäk.," July 3, 1880.
50. Wheeler, J.—Case of extra-uterine fœtation, simulating obstruction of the bowels. "Lancet," July 31, 1880.
51. Tait, L.—Extra-uterine gestation treated by abdominal section.—The treatment of pelvic suppuration by abdominal section and drainage. [Royal Med. and Chir. Soc.] "Lancet," May 22, 1880.
52. Reeve, J. C.—A case of extra-uterine pregnancy, with successful application of electricity. "Trans. Am. Gyn. Soc.," vol. iv, 1879.

5. Dr. M'Clintock treats of *dropsy of the amnion*, with special reference to an acute form of the affection, characterized by a rather sudden and excessive increase in the amount of liquor amnii, followed by the premature birth of a dead and decomposing fœtus, the liquor amnii being offen-

sive and the placenta generally very large and soft. [It is to be noted that, in a case cited by Dr. Roe in the discussion, the placentæ (the case being one of twins) were very small.] Hydramnios always involves danger to the child—especially the acute form; and the induction of premature labor would be proper if the stage of viability had been reached. Medicines administered to the mother for the purpose of preserving the child's life, including the author's favorite prescription of chlorate of potassium and iron, alone and together, have thus far failed of their purpose. He suggests the use of arsenic. As regards the mother, her symptoms, although they may be severe and alarming, will subside very rapidly after delivery. Inertia of the uterus is apt to occur, however, with difficulty in expelling the placenta and a tendency to post-partum hæmorrhage.

8. Dr. Parvin, writing upon the *treatment of abortion*, states his belief that ergot is a hindrance rather than a help in securing complete evacuation of the uterus in early abortions. The tampon, however, especially if introduced into the cervical canal, assists to procure dilatation, and, while restraining the loss of blood, causes what little escape of blood takes place above it to aid in separating the ovum from its attachments to the uterus. So long as the ovum is entire (and its integrity should be scrupulously preserved), we may hope for its complete expulsion, and should usually abstain from active interference. When the sac is broken, we should empty the uterus artificially, if, after removing a tampon that has been applied a few hours, the hæmorrhage is at all profuse and the ovum is not expelled at once. This should be done with the finger; and, instead of drawing the uterus down within reach of one finger, as recommended by Simpson, of Edinburgh, it is better to follow the practice of Mauriceau—introduce the hand into the vagina (under anæsthesia), and use two fingers within the uterus, "as crabs do when they grip anything with one of their forked claws." When immediate evacuation of the uterus is demanded, on account of dangerous hæmorrhage or an offensive discharge, announcing the possibility of septicæmia, there is a still better way to proceed: "Let the patient lie on her back upon a hard bed, her hips brought to its edge, lower limbs strongly flexed; then introduce Neugebauer's speculum, and bring the os fairly in view; now catch the anterior lip with a simple tenaculum, or, better, with Nott's tenaculum-forceps, and then, if there be any flexion—and it is not uncommon in cases of spontaneous abortion to observe this—use gentle traction to straighten the bent canal; at any rate, fix the uterus by the instrument. Now, take a pair of curved polypus-forceps of suitable size, or, better still, Emmet's curette-forceps, and gently introduce the closed blades into the uterine cavity, open them slightly, then close them and withdraw, when the fragments of membranes can be removed, and the instrument reintroduced. Repeat this three or four times if necessary." The uterus should then be swabbed out with Churchill's tincture of iodine by means of an applicator. Finally, ten or fifteen grains of quinine should be given, and it will be very rarely indeed that convalescence will not be prompt and perfect.

9. In the discussion that followed the reading of Dr. Stevens's paper on *the treatment of abortion* before the Obstetrical Society of Cincinnati, Dr. Goode stated that he was in the habit of plugging the cervical canal with a sponge-tent (prepared to suit each case) in all instances of severe hæmorrhage. Whatever might be said against this means, it was very reliable. He would not let the tent remain longer than twelve hours. He did not think it an easy matter, or always the best plan, to remove the decidua. ═══ Dr. Palmer deprecated meddlesome interference. He was now less anxious in regard to hæmorrhage than he had been formerly. He thought that ergot acted, not upon the cervix alone, but upon the whole organ—most decidedly and most efficiently upon the corpus uteri,

where the muscular fibers were best developed. He thought the tampon stood first among means for controlling hæmorrhage. When properly applied, the physician might leave the patient for the time being with the assurance that no great hæmorrhage could occur. His method was, to place the patient in Sims's posture, and, with the aid of a Sims's speculum, pack the cervical canal and the vaginal vault full of soft muslin. Besides stopping hæmorrhage, the tampon favored contractions of the body of the uterus, dilatation of the cervix, and expulsion of the ovum. It should be changed every twelve hours, and the vagina cleansed with carbolized water. He had sometimes used ice, both externally over the fundus, in the vagina, and in the cervical canal. It usually acted very promptly and decidedly, and he had never known it produce other unpleasant symptoms than a temporary chilling. In years past he had injected the uterine cavity with a dilute solution of persulphate of iron. Although none of his patients had died from it, he now considered it bad practice; for, while it checked the flow of blood temporarily, it filled the uterine cavity with hard, dry clots, irritating to the mucous surfaces; materially increased the risk of septicæmia by the decomposition of these clots; and heightened the danger of phlebitis, metritis, etc. The finger was the best instrument for emptying the uterus, but this should not be attempted when the ovum was still above the os internum. Attempts to remove undetached decidua increased the hæmorrhage and every other danger incident to abortion. In cases of persistent hæmorrhage for weeks and months, the causes would be found in the retention of pieces of decidua, etc., and a granular condition of the endometrium; and nothing acted so promptly and thoroughly as the use of the curette—a dull-edged copper instrument. ═══ Dr. Reamy classed all miscarriages prior to the period of viability as abortions, but his remarks were limited to cases occurring before or about the third month. Where the existence of a syphilitic taint was clearly indicated, either by the history or by the symptoms, it was the physician's duty in the interest of humanity, no matter at what period the abortion was threatened, to do nothing to arrest it, but rather to facilitate it, "since one must recoil at the idea of a syphilitic child being born into the world." [We must enter our protest against this teaching. It is our simple duty to save life whenever it is possible, whether it be the life of a vigorous man or that of a syphilitic fœtus.] The amount of hæmorrhage did not always represent the degree of certainty that the abortion would be consummated. If the blood came from that portion of the uterus that corresponded to the lower segment of the ovum, so that it could escape freely as soon as it was discharged from the vessels, a large amount might be lost without serious interference with the nutrition of the embryo. He had seen several cases where the uterus had been excited to such contraction as to dilate the os and even protrude the membranes, and yet, with rest and the "sedative" action of ergot or other uterine hæmostatics, the cases had gone on to term, and healthy children had been born. Assuming, in any given case, that abortion was inevitable, nothing special need be done, so long as the hæmorrhage was not alarming, and there was no evidence of putrescence or septicæmia. When hæmorrhage was profuse, evacuation of the uterus was the only certain means of permanently arresting it. If, however, the cervix were not sufficiently dilated for the purpose, it was proper to tampon it. The ordinary vaginal tampon would often allow of dangerous hæmorrhage above it. The sponge-tent, although very efficient, was not free from danger, especially if allowed to remain in place from eight to twelve hours. For several years he had used shreds of lint or strips of old muslin torn very fine, crowded firmly into position with a uterine probe, the parts being brought into view with a large bivalve speculum. He now found absorbent cotton answer better than anything else, saturated with a one-per-cent. solution of carbolic acid or a solution of alum, which was both antiseptic and a thorough hæmostatic. He objected to drawing the uterus downward, as straining its attachments posteriorly, and as liable to produce cellulitis. The removal of the ovum with the fingers was often a matter of difficulty, he thought, except when it had become detached and was merely retained in the cervix, from which situation it was easy and safe to remove it with an instrument shaped somewhat like a curette, but firmer and stronger. Whenever the ovum was believed to be still attached to the uterine wall, and the symptoms demanded its speedy removal, other means failing, he would anæsthetize the patient, and pass the hand partly into the vagina, in order to reach the depth of the uterine cavity with the fingers.

12. A discussion on *the use of anæsthetics in parturition* followed Dr. Boisliniere's recital of a case of labor in which signs of impending death were produced by the use of chloroform. During the stage of dilatation, the patient had received three enemata, at half-hour intervals, each containing forty grains of chloral and half a teaspoonful of laudanum. Half an ounce of chloroform was given in the course of half an hour (during the use of the forceps), when the breathing suddenly ceased, and blood rushed out of the mouth and nose. There was a convulsive movement, and then the tongue was drawn in. The patient was cyanotic. Reaction was established by opening all the windows, dashing cold water upon the face, and pulling the tongue forward. The speaker asked if the effect could have been in a measure due to the chloral. This query was not answered, but Dr. Gehrung was inclined to think that the poisonous action of chloroform might be intensified by the simultaneous use of ergot, since the tendency of each was to cause cerebral anæmia.

17. Professor Braun gives brief notes of twelve cases in which *Tarnier's forceps* was used, and states his impressions in regard to the advantages and the disadvantages of the instrument. The traction need not be so forcible as with the ordinary forceps, but the maternal parts are liable to be injured. The instrument can not slip, but this is a questionable advantage, except the operator be a skillful one. His cases do not sustain Tarnier's claim that the instrument is less apt to injure the perinæum. The fact that, by virtue of the movable attachment of the traction-shanks to the blades, the coincidence of the head's progress with the pelvic axis is not interfered with, is certainly an advantage, but such constant attention needs to be given to the traction-shanks that an inexperienced operator is apt to overlook the great lateral distention of the vagina that is sure to take place, and injury of the vagina is then inevitable. The "guide" is of no great assistance, for the skilled operator does not need it, and none other could easily turn it to account. As to the disadvantages of the instrument, it is far more difficult of introduction than the ordinary forceps. Especially is this true of the right blade. Not only have two shafts to be managed with one hand, but the blades are decidedly broad, short, and sharply curved, which makes the insertion of the right one between the head and the uterine wall particularly difficult. A further drawback is, that, if the head should happen to be seized by its greatest circumference, such great power may be exerted that the head must follow, even if it be destroyed or the maternal soft parts be irreparably damaged.

19. In his article on *craniotomy, Cæsarean section, laparo-elytrotomy, and Porro's operation*, Professor Kinkead argues most forcibly against the teaching that has led to the appalling prominence of craniotomy in British practice. The great interest of the paper, however, lies in that portion of it that deals with laparo-elytrotomy and Porro's operation. In tracing a parallel between laparo-elytrotomy and the Cæsarean operation, the dangers to be compared are, he says, hæmorrhage and septicæmia.

The peril from septicæmia he thinks to be the greater in the Cæsarean operation; that from hæmorrhage, in laparo-elytrotomy, although he quotes Dr. Garrigues's suggestion that this danger may almost wholly be done away with by using the cautery, and by tearing, instead of cutting, in opening into the vagina. Vesico-vaginal fistula may be avoided by prolonging the rent backward, and by extracting slowly, so that the parts may have time to expand, and thus limit the extension of the vaginal wound. The merits of the operation can not yet be stated precisely, and, should experience show its results to be as favorable as theoretical considerations would indicate, still its field is limited. It is doubtful if it can be repeated on the same side, and its performance on the left side, after it had once been done on the right, would be difficult, not alone from lack of room, but from the impediment offered by the vaginal cicatrix; it can not be performed if the head is wedged in the pelvis; if the os is occluded; if there is occlusion or narrowing of the vagina, or its obliteration by cicatricial tissue; when the pelvis is blocked by tumors, or the os uteri is the seat of considerable disease. If, however, the mortality from it should prove to be no greater than from timely Cæsarean section, it should head the list of these operations. In regard to Porro's operation, too, experience is still insufficient to enable us to set down its precise value. Theoretically, it does away at once with three of the perils of the Cæsarean operation—metritis, hæmorrhage, and intestinal obstruction, and enormously reduces that of septicæmia. The amount of shock is the same, while the liability to peritonitis is lessened. It should be practicable, he thinks, to tighten the ligature before opening the uterus, without endangering the child's life, for, the embarrassment from bleeding being done away with once for all, the uterus could be opened and the child extracted in less time than that for which the placental function is necessarily suspended in extraction after podalic version. He sees no reason why the mortality should not be brought down to that of ovariotomy—seven per cent. The objection on the score of "unsexing" the woman he disposes of most admirably: "Women, with their strong maternal affection, bear the pangs of labor cheerfully, in the expectation of having their reward in the baby to love and cherish; but how dreadful is the suffering of the poor creature uncheered by such a hope, who knows that her life is in grave peril, that the result of all will be only a mangled infant, that for her there will be no little one to caress and love, and that the life she has borne through nine months will be extinguished, ere it is born, in order to prolong her own existence, and further, that, if she escapes this time, in all probability she will have to go through it all again! For her, would not a living child once, and future barrenness, be an inestimable blessing?" If the pedicle can safely be tied and dropped into the abdomen, the range of the operation will be extended. A sloughy action in the stump, or such an amount of shrinking as to relax the ligature and thus allow of secondary hæmorrhage, would render this modification hazardous; and thus far we have no means of distinguishing the cases in which these events are likely to happen. The raw surface of the stump should not be left exposed in the abdominal cavity, and this might be obviated by making the cervical incision V-shaped, and then bringing the flaps together with sutures.

22. Professor Veit records a case of *Porro's operation* which ended fatally, although death was not due to the operation itself. Facial erysipelas supervened on the third day, the patient having done well up to that time, and death took place within twenty-four hours. A small abscess was found in each kidney. In this case the operative procedure was somewhat modified, in accordance with hints drawn from Freund's operation of total extirpation of the uterus and Schröder's method of closing the stump with sutures after removal of the organ for tumors. Moreover, the constriction of the cervix was only temporary, an Esmarch's bandage being used for the purpose. The constrictor was tightened before the uterus was opened, and yet the child cried at once on being extracted. The abdominal incision was about eighteen centimetres long, beginning three centimetres above the symphysis. The uterus, still intact, was easily drawn out through this opening. At the same time two coils of small intestine were extruded, but they were easily replaced, and, to prevent a repetition of this occurrence, the upper part of the abdominal wound was closed with sutures at once. An Esmarch's bandage was now thrown around the isthmus, six centimetres below the ovaries, the uterus was opened, and the child was extracted. Only a very little venous blood issued from the uterine incision. Each broad ligament was now tied with two ligatures, the inner one reaching to the border of the isthmus, and the ligaments were then cut through. On the right side the uterine artery was seen to have been divided, and a special ligature was applied to it. The uterus was now severed by an incision near the isthmus. To close the stump, four deep sutures, including the whole thickness of the cervix, were applied, together with twelve superficial sutures. At this juncture, on removing the constrictor, a stream of blood from the left uterine artery welled up between the sutures. This was controlled by passing a double ligature through the stump, one thread of which was tied at the left-hand margin of the stump and the other at its top. The abdominal wound was closed with thirty sutures. The whole operation, with only one assistant, was over in three quarters of an hour. The author suggests that, by rupturing the membranes at the beginning of the operation, the uterus may be lessened in size somewhat, so that it may be brought out through a comparatively short abdominal incision.

25. Professor Taylor's case of *Porro's operation* is thus far the only one that has been done in this country. The pedicle was dropped. An abstract of the case, as related by the operator at a meeting of the New York Obstetrical Society, will be found in the August number of the "JOURNAL," p. 184.

26. The case of *Porro's operation* related by Dr. Demaison is remarkable as having resulted favorably to the mother, although performed under very adverse circumstances. The woman had been in labor eight days, and was "*presque agonisant.*" The child had been dead several days. Six practitioners, "strangers to the pomps of the official clinics and free from the puerperal miasms of the lying-in hospitals," are credited with having taken part in the operation. The pedicle was secured in the wound with a Thomas's clamp.

27. Dr. Frommel, in his article on *the etiology and treatment of rupture of the uterus*, states that by palpation of the uterus during a pain, proceeding from above downward on its anterior aspect, he finds that, at a point more or less above the symphysis, the hard, contracted tissue of the uterus ceases to be felt, the portion below this level being soft and flaccid. To recognize this state of things, it is necessary that the voluntary action of the abdominal muscles be kept in abeyance, for which purpose the use of an anæsthetic is sometimes necessary. That the soft tissue below is really a portion of the uterus is shown by the fact that the presenting part of the fœtus can be felt to be contained in it, and also by conjoined examination after delivery; that the condition is not due to pressure against the pelvic inlet is shown by its presence in those primiparæ in whom the head is already within the pelvis before labor begins. This line of demarkation between the contracting and the flaccid portions of the uterus (which Bandl supposed to correspond to the os internum, but which seems to be situated in the proper body of the organ, and which, after

Schröder, the author prefers to call the "contraction-ring") is generally two or three finger-breadths above the symphysis, often midway between the latter and the umbilicus, and in some instances almost as high as the navel. Where the last-named condition obtains, the intervention of art is needed to prevent excessive distention of the lower segment and consequent rupture, as described by Bandl. The behavior of the round ligaments is of material aid in diagnosticating this condition of distention. One of them can usually be seen and felt to stand out more prominently than its fellow during a pain, and it indicates that the distention is greatest on that side—generally the side at which the occiput is situated; the line of demarkation will then be found to run obliquely from below on the side of the least, to a higher point on the side of the greatest, distention. Seven cases are given in which laparotomy was performed after rupture. They all ended fatally. An eighth case is related in which the rupture took place during the operation of turning by the feet, and in which, before the operation was undertaken, the child was recognized as being almost wholly contained in the over-distended lower segment of the uterus. A drainage-tube was passed into the abdominal cavity through the rent. By virtue of the most painstaking after-treatment, the patient finally did well. The author considers laparotomy indicated where the fœtus has been expelled into the abdominal cavity; where the secretions are already ichorous; and where there is so much hæmorrhage from the rupture as to make it necessary to close it with sutures. Where, on the other hand, the child is living or but recently dead, and it seems possible to deliver *per vias naturales* without inflicting too much injury, and where but a short time has elapsed since the rupture took place, drainage should be the method of treatment. For the first two days we must depend upon the drainage-tube, but, after a wall of exudation has formed, the resulting cavity is to be treated with antiseptic injections.

29. In a short article on *puerperal convulsions*, Dr. Murphy briefly states the chief points for and against some of the theories as to etiology —especially the chemical theory of Frerichs and the mechanical theory of Traube and Rosenstein. Whenever we find œdema, with casts and albumen in the urine, during pregnancy, it is best to adopt dietetic measures of prevention; starchy diet, or one chiefly made up of vegetables, with sugar and cream, seems to answer best. He has often had good results from an occasional jalap purge and the free use of spirit of nitrous ether and tincture of perchloride of iron. Premature labor should not be brought on unless called for by urgent symptoms. Where convulsions have already begun, chloroform should be given freely. Perhaps its good effect is partly due to its causing a temporary glycosæmia, thus interfering with the conversion of urea into carbonate of ammonia. The narcotism should be kept up by the hypodermic use of morphia or, preferably, by enemata of chloral. He argues against blood-letting, but thinks it is sometimes well to use wet cups over the kidneys. He calls attention to a case reported by Dr. W. Lange, in which transfusion succeeded after the failure of many other measures, and urges a resort to it where other means fail. As to the management of the labor, if delivery can be hastened without much difficulty and without adding materially to the irritation already present, it is better to follow that course, especially in the interest of the child.

31. In Dr. Clark's paper on *the treatment of puerperal convulsions with morphia*, the current theories as to the pathology of the disease are looked upon as little less than ridiculous. The author takes the broad ground that there is no demonstrable pathology, but that the affection is the result of an overburdening of the nervous system by the mere fact of pregnancy. He does not deny, however, that there may be a subsidiary toxic element; nay, he even specifies that there is probably a transfer of some peccant matter from the ovum to the mother's system. Œdema, albuminuria, etc., are of no account as indicating the probability of convulsions; the chief signals of danger are, "pain in the head, continuous or paroxysmal; alteration and figments of the senses, especially of sight; mental dullness and ataxy; a countenance expressive of suffering and apprehension; an irresolute and incapable manner, and complaint of indefinable distress." Opium will dispel these symptoms and prevent convulsions as surely as quinine will break up intermittent fever, and its effect is no less absolute even after convulsions have actually set in. One to three grains of opium should be given daily for the premonitory symptoms. When a convulsion has actually taken place, a grain and a half of morphia should be given hypodermically at once; if a paroxysm occurs at any time after two hours, this dose should be repeated; if the patient is in labor she should have another dose after eight hours in any event. These doses are perfectly safe, for the disease involves a remarkable tolerance of the drug. Evacuant treatment is allowable, and perhaps useful, but the opium should be the main reliance. When properly used, he has never seen it fail to ward off threatened eclampsia; and he has never known a patient to die of the disease when the drug had been given in season, in sufficient quantity, and in the proper manner.

32. Mr. Gorst gives a case of *post-partum hæmorrhage*, due to laceration of the cervix. We can scarcely concede that this is a "rare form of uterine hæmorrhage."

33. In the treatment of *post-partum hæmorrhage*, Dr. Engelmann includes, among the preventive measures recommended, the administration of a full dose of ergot when the head comes to distend the perinæum. This practice we can not but regard as questionable. He enumerates and discusses the chief expedients usually resorted to in the presence of hæmorrhage, but urges that not much time should be lost in trying the ordinary measures. If the case is at all rebellious, recourse should be had at once to the application of perchloride of iron to the interior of the uterus—not by the dangerous method of injection, but by swabbing with cotton wads moistened with the solution. The uterus should first be swabbed as clean as possible, and then the swabbing with the iron solution should be kept up until the bleeding stops. The work should be done with the aid of a speculum. The author maintains that this method is perfectly safe.

42. Dr. Hofmeier doubts the utility of *irrigation of the uterus after delivery* as a routine practice for the prevention of puerperal disease. It may fairly be questioned, he thinks, if the weak solutions of carbolic acid, salicylic acid, and the like, generally employed for the purpose, are really capable of producing sufficient disinfection. Unless a special apparatus is provided for each patient [his paper bears particularly upon hospital practice], there is danger of transferring infection from one patient to another. Moreover, we can not always be sure that, when we have dislodged a decomposing mass from some situation where it might have done no harm, we do not force it into the uterus, instead of washing it out. As a matter of fact, his results have been rather better since he gave up the practice. When, however, there is evidence of actual septic trouble in a given case, we should choose the lesser of the two evils, and resort to the injections.

GYNÆCOLOGY.

1. CAMERON, A. H. F.—The relation between uterine and hepatic disorders. "Med. Times and Gaz.," July 1, 1880.
2. HERZ, L.—Ueber den Gebrauch des Scheidenspiegels bei den Juden in der talmudischen Zeit. "Wien. med. Woch.," July 17, 1880.

3. Ahlfeld, F.—Die neuen Anschauungen über Zusammenhang von Menstruation, Ovulation, und Befruchtung und die practischen Consequenzen derselben. "Deutsche med. Woch.," Aug. 14, 1880.
4. Studley, W. H.—A self-retaining, adjustable Sims's speculum and gluteal holder. "Am. Jour. Obstet.," July, 1880.
5. Zeissl, H.—Ueber Cysten in den Schamlippen. "Med.-chir. Central-Bl.," May 28, 1880.
6. Duncan, J. M.—Clinical lecture on vaginitis. "Med. Times and Gaz.," June 26, 1880.
7. Taylor, I. E.—Atresia of the vagina, congenital or accidental, in the pregnant or non-pregnant female. "Trans. Am. Gyn. Soc.," iv, 1879.
8. Charrier, A.—Du traitement par les alcalins d'une cause peu connue de stérilité (acidité du mucus utéro-vaginal). "Bull. Gén. de Thérap.," June 15, 1880.
9. Bozeman, N.—Kolpoecpetasis versus partial kolpokleisis. "Trans. Am. Gyn. Soc.," iv, 1879.
10. Herrick, O. E.—A modification of the clamp suture to be used in operating for vaginal fistula. "Michigan Med. News," July 26, 1880.
11. Byrne, J.—Kolpo-cystotomy by galvano-cautery. "Trans. Am. Gyn. Soc.," iv, 1879.
12. Duncan, J. M.—Clinical lecture on menorrhagia. "Med. Times and Gaz.," Aug. 7, 1880.
13. Paget, G. E.—Menorrhagia brought on in old age by emotional disturbance. [Cambridge Med. Soc.] "Brit. Med. Jour.," July 3, 1880.
14. Goodell, W.—Clinical notes on the elongations of the cervix uteri. "Trans. Am. Gyn. Soc.," iv, 1879.
15. Galabin.—Pathological anatomy of erosions of the cervix uteri. [Obstet. Soc. of London.] "Obstet. Jour. Gr. Brit. and Ire.," July, 1880.
16. Ruge, C.—Die Erosion und das Ectropium, sowie über die Herkunft des Cylinderepithels an der Vaginalportion bei Erosion. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
17. Jackson, A. R.—Lacerations of the neck of the uterus. "Am. Pract.," July, 1880.
18. Sims, M.—De l'épithélioma du col utérin et de son traitement. "Ann. de Gynéc.," June, July, 1880.
19. Eustache, G.—De l'amputation du col de l'utérus par le thermo-cautère. "Bull. Gén. de Thérap.," June 15, 1880.
20. Frommel, R.—Zur operativen Therapie des Cervixcarcinoms in der Complication mit Gravidität. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
21. Ruge, K.—Zur Aetiologie und Anatomie der Endometritis. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
22. Schultze, B. S.—Der Probetampon, ein mittel zur Erkennung der chronischen Endometritis. "Centralbl. f. Gyn.," Aug. 14, 1880.
23. White, J. P.—Hints relative to intra-uterine medication. "Trans. Am. Gyn. Soc.," iv, 1879.
24. Battey, R.—Intra-uterine medication by iodized phenol. "Trans. Am. Gyn. Soc.," iv, 1879.
25. Campbell, H. F.—Premature senile obliteration of the uterine cervical canal. "Trans. Am. Gyn. Soc.," iv, 1879.
26. Schultze, B. S.—Zur Kenntniss von der Methoden der Dilatation des Uterus. "Centralbl. f. Gynäk.," July 17, 1880.
27. Braithwaite, J.—A note on the treatment of sub-involution of the uterus. "Obstet. Jour. Gr. Brit. and Ire.," June, 1880.

28. Kurz, E.—Die acute Metritis. "Memorabilien," July, 1880.

29. de Sinéty.—Des ulcérations du col de l'utérus dans la métrite chronique. "Gaz. Méd. de Paris," July 10, 1880.

30. Terrillon et Auvard.—Traitement de la métrite parenchymateuse par les scarifications du col de l'utérus. "Bull. Gén. de Thérap.," July 15, 30, 1880.

31. Martin, A.—Ueber die Verwendung des Jodoforms bei gynäkologischen Leiden. "Centralbl. f. Gynäk.," July 3, 1880.

32. Wing, C. E.—The proper use of the hot vaginal douche. "Boston Med. and Surg. Jour.," June 17, 1880.

33. Byford, W. H.—Chronic inversion of the uterus. "Trans. Am. Gyn. Soc.," iv, 1879.

34. Jenks, E. W.—Supposed inversion of the uterus. Fibroid development of posterior half of uterus, and vaginal atresia. "Obstet. Gaz.," June, 1880.

35. Hewitt, G.—Report of sixty-seven cases of uterine distortion or displacement treated, etc. [Obstet. Soc. of London.] "Obstet. Jour. Gr. Brit. and Ire.," July, 1880.

36. Van de Warker, E.—The relations of symptoms to versions and flexions of the uterus. "Trans. Am. Gyn. Soc.," iv, 1879.

37. Herman, G. E.—On the class of cases in which vaginal anteversion pessaries give relief to symptoms. "Obstet. Jour. Gr. Brit. and Ire.," May, June, 1880.

38. Hart. D. B.—On sacro-pubic hernia, otherwise known as prolapsus uteri. "Edinb. Med. Jour.," Aug., 1880.

39. Wathen, W. H.—Radical cure of procidentia uteri. "Med. Herald," June, 1880.

40. Mermann, A.—Indication und Technik der gegen den Prolaps gerichteten Operationen. "Deutsche med. Woch.," July 24, 31, 1880.

41. Dobson, N.—Cases illustrating some of the difficulties of diagnosis in abdominal tumors of women. "Obstet. Jour. of Gr. Brit. and Ire.," May, 1880.

42. Williams, J.—On some periodical changes which occur in fibroid tumors of the uterus, and their significance. "Lancet," May 15, June 5, 1880.

43. Roehrig, A.—Erfahrungen über Verlauf und Prognose der Uterusfibromyome. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.

44. Kessler, A.—A contribution to the hypodermic ergot treatment of uterine myomata, etc. "Am. Jour. Obstet.," July, 1880.

45. Gusserow, A.—Ueber die Behandlungen der Blutungen bei Uterusmyomen. "Deutsche med. Woch.," May 29, 1880.

46. Burckhardt, H.—Beitrag zur Therapie der Uterus-Fibromyome. Neue Operationsmethode bei submucösen Tumoren. "Deutsche med. Woch.," July 3, 1880.

47. Thornton, K.—Removal of uterine fibroids by laparotomy. "Obstet. Jour. of Gr. Brit. and Ire.," May, 1880.

48. Elder, G.—Note on Chian turpentine in uterine cancer. "Obstet. Jour. of Gr. Brit. and Ire.," July, 1880.

49. Woelffler.—Ueber die Extirpation des Uterus, die durch W. A. Freund's berühmte Operation von Neuem in Fluss gekommen ist. [Deutsch. Gesellsch. f. Chirurg.] "Deutsche med. Woch.," May 22, 1880.

50. Mundé, P. F.—Prolapse of the ovaries. "Trans. Am. Gyn. Soc.," iv, 1879.

51. Assaky.—Sarcôme encéphaloïde de l'ovaire. "Progr. Méd.," May 15, 1880.

52. Burnier, H.—Ueber Tubo-ovarialcysten. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
53. Larrivé.—Kystes de l'ovaire et ovariotomie. "Lyon Méd.," May 16, 23, 1880.
54. Péan.—De l'ablation des tumeurs du ventre, considérée dans ses rapports avec la menstruation, les appétits vénériens, la fécondation, l'état de grossesse et l'accouchement. "Gaz. Méd. de Paris," April 3, May 22, June 12, 1880.
55. Möricke, R.—Entzündung der Ohrspeicheldrüse als Complication von Ovariotomien. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
56. Reynier, P., et Richet, C.—Expériences relatives au choc péritonéal. [Acad. des Sci., Paris.] "Gaz. Méd. de Paris," June 12, 1880.
57. Schröder, C.—Die Laparotomie in der Schwangerschaft. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
58. Thornton, J. K.—The various methods of dealing with the pedicle in ovariotomy. "Med. Times and Gaz.," May 22, June 5, 1880.
59. Tait, L.—The Listerian method in ovariotomy. "Med. Times and Gaz.," June 26, 1880.
60. Thornton, J. K.—The Listerian method in ovariotomy. "Med. Times and Gaz.," July 10, 1880.
61. Tait, L.—An instance of the mischievous effects which may arise from the Listerian precautions in abdominal section. "Med. Times and Gaz.," July 31, 1880.
62. Wells, T. S.—Case of removal of both ovaries for dysmenorrhœa (Battey's operation). "Trans. Am. Gyn. Soc.," iv, 1879.
63. Savage, T.—On oöphorectomy. "Obstet. Jour. of Gr. Brit. and Ire.," May, 1880.
64. Malins, E.—Two cases of oöphorectomy. [Birmingham General Hospital.] "Brit. Med. Jour.," May 22, 1880.
65. Tait, L.—Note on oöphorectomy. "Brit. Med. Jour.," July 10, 1880.
66. Low, R. B.—Death from pelvic hæmatocele (?) simulating irritant poisoning. "Brit. Med. Jour.," May 29, 1880.
67. Chadwick, J. R.—Cases of sporadic septicæmia in gynæcological practice. "Trans. Am. Gyn. Soc.," iv, 1879.

12. In a clinical lecture on *menorrhagia*, Professor Duncan rapidly sketches some of the various forms of hæmorrhage from the genitals in women, and closes with some brief remarks as to treatment. Rest should be enjoined in all cases. The best internal remedy is ergot; then come sulphuric acid, digitalis, and cannabis indica—mentioned in the order of their efficiency. Ergot does not act at once, but only after several days' administration. It is well to combine the sulphuric acid with some saline, and no harm is done if slight relaxation of the bowels results. Hot-water vaginal injections are more potent than the use of cold. The tampon, even a very imperfect one, is often quite efficacious. In rebellious cases the bleeding surface should be painted with a "styptic." If the os uteri is not dilated, some such instrument as a hollow probe may be passed through it, and the styptic injected, but perchloride of iron, which is the most powerful styptic, should not be injected. [We fail to see how a hollow probe could be passed when an armed applicator could not; and we think the practitioner should be cautioned against *all* intra-uterine injections, as well as against that of perchloride of iron.]

13. Dr. Sims's essay on *epithelioma of the cervix uteri* closes with the following propositions: 1. The cervix affected with epithelioma should not be amputated with the galvanic cautery or the écraseur, nor should epithelial tumors of the cervix be removed by those means. 2. It is necessary to remove the whole of the diseased tissues, even up to the os inter-

num if the epithelioma has extended to that point. 3. The hæmorrhage should be arrested by applying cotton soaked in a solution of perchloride of iron or alum. 4. When the styptic cotton is removed, the wound should be cauterized with chloride of zinc or some other agent capable of causing the formation of an eschar. 5. After the eschar has been detached, the patient should take daily injections of warm carbolized water until the wound is fully healed. After the wound is healed, an arsenical course of treatment should be followed, and the patient should be examined every three months, that relapse may be discovered. 7. When we find fungous granulations or little nodules resulting from a relapse, we must remove them at once and cauterize the surface at the time. 8. Almost all cases of epithelial cancer may be benefited by surgical intervention, even those that are very far advanced.

19. Dr. Eustache relates a case in which he performed *amputation of the cervix uteri with Paquelin's cautery.* Every new surgical procedure, he remarks, is apt to be carried to extremes, and he seems to think that his course of action in this instance illustrates the proposition. The case was one of simple elongation of the cervix. The end of the cervix was embraced in a large wooden speculum, and then seized with a hooked forceps. As it was thought that the operation would be a rapid one, no anæsthetic was used. The section was begun with the curved blade of the cautery, at a dull-red heat. After a few instants, the knife began to grow brown, and a dense cloud of smoke filled the lower part of the speculum, entirely hiding the parts from view. Nevertheless, the operator kept up his pressure on the knife, calling to his assistant to work the bulb more briskly, in order to bring the blade to a red heat again. After three or four minutes, the patient complained of intense burning in the whole vagina, and cried out with pain, and the wooden speculum was so hot that the assistant could scarcely hold it in place. The smoke was so thick that nothing could be seen, and the operator was obliged to stop and throw cold water into the speculum, in order to dissipate the smoke and calm the sensation of burning. After five minutes he began again, but the smoke and heat soon obliged him to desist again. He was thus interrupted six times, and the whole operation lasted forty minutes, during which time the patient suffered atrociously. The section, too, which he had intended to make somewhat conical, with a smooth surface, was irregular and jagged in the extreme. After all, he had to twist off some pieces of tissue. The patient did well, but the author declares that he will never again use Paquelin's cautery for that purpose, although expressing a due sense of its great utility under many other circumstances.

22. Professor Schultze's article deals mainly with the *diagnosis of corporeal endometritis.* A watery discharge, more or less abundant, is laid down in recent handbooks as a characteristic symptom, but it does not occur in one case in ten. Tenderness on passing the sound is absent in many cases, and, moreover, the passage of the instrument by an unskilled hand is apt to provoke pain where there is no endometritis. Cases in which intra-uterine palpation is practicable constitute but a minority. The character of the discharge, however, is a means of diagnosis available to the general practitioner. The secretion may be trifling in amount, so that patients honestly say that they have no leucorrhœa, but, no matter what its quantity, if purulent, it is characteristic of the disease. Now, a cervical endometritis also may give rise to a purulent discharge, but such a discharge from the cervix mingles with the normal cervical mucus, whereas pus from the corporeal cavity does not. To obtain the corporeal discharge, the author proceeds as follows: a tampon of absorbent cotton is moistened with glycerine, and its surface is then thoroughly imbued with a twenty-five-per-cent. solution of tannin in glycerine. After carefully cleansing the vault of the vagina, this tampon is methodically spread out over the face of the cervix. At the end of twenty-four hours it should be removed with the aid of a speculum, when the morphological constituents of the discharge will be found upon it in the shape of lumps, and should be examined microscopically. Their gross appearance, however, is distinctive, as they are opaque and of a yellow or greenish color. The characteristic discharge does not always take place every day, so that a single failure to find it does not disprove the existence of the disease. This intermittent character may be due to retention from cervical stenosis, or the actual formation of the pus may be periodical. Where there is an abundant purulent discharge from the cervix, especially with erosion or eversion of the cervix, the diagnosis can not be made in this way. The proceeding is of value also as a test of the progress made toward cure. The patient should not be considered as cured unless, for a certain length of time after the cessation of symptoms, including a short space after the next menstruation, the tampon shows no pus.

26. Professor Schultze maintains the superiority of *laminaria tents for dilating the uterus*, whether for exploratory purposes or to facilitate applications to the endometrium. Even where permanent enlargement of the canal is sought to be obtained by incision or divulsion, it is best to precede the operation by the use of laminaria. He has used it in more than a thousand cases during the past three years, for diagnostic and therapeutical purposes, for the most part operative procedures; and in only five cases has parametritis followed, and in no instance was this specially severe. He avoids danger by disinfecting all the instruments used, including the tent itself; by washing out the uterine cavity with a carbolic-acid solution injected through a catheter reaching to the fundus; and by studiously avoiding all traumatism in the introduction.

27. In the *treatment of sub-involution of the uterus*, Dr. Braithwaite has had excellent results from a plan first made known to him by Dr. Wynn Williams. A delicate whalebone applicator, armed with cotton, is dipped into a mixture of equal parts of iodine, iodide of potassium, and alcohol, and carried up to the fundus, where it is allowed to remain for a few moments. The introduction is facilitated by passing a sound beforehand. Strong muscular contraction at once occurs, unless there is endometritis, in which case the affection of the endometrium should first be subdued by the use of ordinary tincture of iodine or carbolic acid. This strong solution of iodine seldom has to be applied more than three or four times, as it causes a speedy reduction of the size of the uterus.

31. Dr. Martin has made use of *iodoform in gynæcological practice* in cases of various sorts. He used it in the form of an ointment, a small quantity of oil of peppermint or Peruvian balsam being added to mitigate the odor. Tampons smeared with this ointment were left in the vagina from eight to twelve hours, and it was applied by inunction to the lower part of the abdomen and to other painful parts. The strength of the ointment is not stated. Two patients refused to have the treatment continued, on account of the disagreeable odor of the drug; others complained of it very much, but perceived such benefit that they preferred to keep on with its use, even though they had to seclude themselves for the time being; some very nervous women complained that it produced dizziness, which, however, was associated with pains in the head. The author divides his cases into three groups: 1. Those treated with iodoform from the beginning, without any other measures than ordinary attention to the bowels, etc., with weak saturnine or carbolized vaginal injections; 2. Those in which iodoform was substituted for the sorbefacients and astringents previously employed; 3. Those in which, along with the use of iodoform, other special treatment was continued—oak-bark baths and injections, extensive pencilings with tincture of iodine (of which he speaks very highly), scarifications, mud poultices, and the like. In some cases marked improvement took place, but this was not the uniform result, and in the majority of instances it did not occur, and the use of other measures was resumed. The best effects were obtained in cases of neuralgia at the climacteric period. Of seven cases treated with external applications of iodoform, two were entirely cured, and the pain was ameliorated in the others. Material benefit was produced in three cases of very obstinate eczema of the vulva. Five patients with carcinoma of the cervix were treated with iodoform. In two of them it was used after erasion and cauterization with chloride-of-zinc paste; granulations quickly formed, the discharge diminished, and the pain was checked for a long time. In the three other cases the odor of the discharge was modified ["umgestimmt"], but there was no change in its quantity or in the admixture of blood, and morphine could not long be dispensed with. The author was much pleased with the action of iodoform in a case of colpitis adhæsiva chronica, also in three cases of colpitis and cervical endometritis during pregnancy. He used the drug in three cases of uterine fibroids, but saw no effect. In eighteen cases of chronic endometritis, all associated with more or less metritis, and most of them with so-called erosions, temporary improvement took place in a few, but not a single cure. The other measures mentioned caused at least as much improvement, and in some instances more. How, he asks, can such small quantities of iodine bring about the absorption of the chronic hyperplasia found in confirmed metritis and endometritis? In thirty-nine cases the chronic metritis was associated with unilateral parametritis, with perimetritis, or with extensive peri- and parametritis. In two cases of this sort, where the exudation was small in amount, very gratifying improvement followed the use of iodoform, but most of them were only ameliorated for the time being, as may happen when any new remedy is tried, until the next menstruation, a cold, a jolt, or the like, brings back the old pain—a sign that the pelvic peritonæum has not yet wholly regained its integrity. Of thirty-one cases of chronic perimetritis and parametritis, a few soon showed great improvement, but most of them were not specially benefited, especially severe cases where the exudation was large. On the whole, the author considers iodoform a welcome addition to other measures, but generally of no greater value than the other means mentioned, particularly the Franzenbad ferruginous mud. [Our own experience with iodoform has led us to look upon it as very effective in the treatment of inflammatory pelvic deposits. It should be used in large quantity, and the tampons should be retained from one to three days.]

37. According to Dr. Herman, *anteversion of the uterus* and *cystocele* are alternative and sometimes concomitant effects of a downward yielding of the anterior wall of the vagina—rarely concomitant, because cystocele tends to prevent anteversion by dragging the cervix forward, while anteversion tends to prevent cystocele by pulling the vaginal wall backward. This yielding of "the pubic part of the pelvic floor" is what gives rise to the only symptoms that are at all sure of being ameliorated by anteversion pessaries—irritability of the bladder and a sense of bearing down; and under these circumstances the pessary does good not by correcting the anteversion (for that of itself is of no consequence), but by pushing up or pulling up the anterior wall of the vagina. This is shown by the fact that a retroversion pessary answers equally well, although it increases the anteversion, as Emmet has observed. An anteversion pessary *pushes* up the anterior vaginal wall; a retroversion pessary *pulls* it up. The particular form of pessary employed should vary in accordance with certain unknown peculiarities of the sensibility of the parts in different patients, whereby one is made comfortable by a pessary that another can not tolerate. Slight cases do not necessarily need pessaries at all, such measures as astringent injections being sufficient to restore the lost tonicity; on the other hand, extreme cases are not to be relieved by vaginal pessaries, since the latter have no firm support. Cases of medium severity are those in which vaginal pessaries may be trusted to give relief. How long they will need to be worn, and whether or not they will accomplish a permanent cure, will depend upon the nature of the force that causes the yielding of the pelvic floor.

45. Dr. Gusserow remarks that *uterine hæmorrhage due to fibro-myomata* generally requires treatment by itself, for in most cases it is best not to undertake the removal of the tumor. The blood proceeds not from the tumor itself, nor from that portion of the endometrium that covers it, but from the remaining portion of the lining membrane of the uterus, which portion, on account of the stretching of the part overlying the tumor, is in a state of venous stasis. As to removal of the ovaries for the purpose of doing away with the menstrual afflux of blood, the data are not yet sufficient to establish its value. Ergotin injections lessen the hæmorrhage in some cases, but their effect is only transitory. Hot-water vaginal injections are still more uncertain. The old practice of scarifying the cervix, or taking blood by means of leeches, before each menstruation, although irrational at first sight, is not so far wrong when we reflect that the hæmorrhage is occasioned by swelling of the mucous membrane. Of course, however, it is impracticable to repeat this process indefinitely. Discission of the cervix is sure to check the hæmorrhage, for a time, at least; provided, as Spiegelberg has shown, the tumor is seated deep in the lower segment of the uterus; and this it does by freeing the over-distended mucous membrane. When the tumor is situated high up, the distention is not relieved, and consequently the operation is of no avail. In the latter case intra-uterine injections of liquor ferri sesquichloridi or of undiluted tincture of iodine are the surest means. The undeniable danger of these injections can be guarded against only by such thorough dilatation of the cervix that the fluid can flow out as freely as it enters the uterus. Even with this precaution, the danger still remains that a too frequent use of the injections may give rise to ulceration of the mucous membrane, and this, if disregarded, lead to gangrene of the tumor. On this account the injections should not be repeated oftener than twice a week at the most, and they should be stopped at once, so soon as tenderness of the uterus or a sero-sanguinolent discharge occurs after them.

46. Dr. Burckhardt describes a case in which Dr. A. Martin performed *enucleation of a sub-mucous fibro-myoma of the uterus through an abdominal incision.* The tumor was a large one, the uterine cavity measuring seventeen centimetres in length, and the fundus rising to the level of the umbilicus. The growth was broadly attached to the posterior wall. The symptoms demanded operative interference, and, for reasons which need not be recounted here, it was judged that laparotomy would offer less difficulty and danger than an attempt to remove the tumor per vaginam. An incision twelve centimetres long was made through the linea alba, and was afterward prolonged five centimetres. The uterus was brought out through this incision, and an elastic constrictor was thrown around the cervix below the tubes and ovaries. The fundus and the anterior wall of the uterus were then incised as in the Cæsarean operation, exposing the tumor. The mucous membrane covering it was then incised, and the tumor was easily shelled out. At the same time a small, flattened mucous polypus was snipped off from the anterior wall. No hæmorrhage took place. The cavity left by the removal of the fibro-myoma was closed with four deep sutures, which, having been passed from the posterior aspect of

the organ, held the walls quilted together. The wound of the mucous membrane was closed with six sutures. The incision through the anterior wall of the uterus was then brought together with about twenty sutures, some deep and others superficial. The ovaries were then examined, and, as their appearance suggested a beginning cystic degeneration, they were both removed. The constrictor was now taken off, and the flow of blood from the suture holes was controlled by compression, sponging, and the insertion of two additional sutures. The uterus was then returned into the abdominal cavity, and the "toilet" of the peritonæum was accomplished simply by once sweeping a sponge through Douglas's cul-de-sac. The abdominal wound was now closed with deep and superficial sutures, and a jute dressing was applied. The operation lasted an hour and a half. The carbolic-acid spray used was rather more than two per cent. in strength, and for six hours preceding the operation the room had been constantly sprayed with a five-per-cent. solution. The patient was slow in coming out from the anæsthesia, and severe collapse then occurred, but she gradually rallied and did well. She was allowed to stand upright on the twelfth day, and was discharged on the twentieth day. The author thinks this method of operating, of which he can find no instance recorded in literature, well worthy of further trial. Whenever a disposition to myomatous degeneration is found, it will be well to remove the ovaries at the same time. Attention is called to the advantage of the natural channel for drainage afforded by the uterine canal. The wound in the uterine wall is much more likely to heal readily than is that made in the Cæsarean operation, as the disadvantages incident to the puerperal condition are absent. [This method of operating is undoubtedly a valuable addition to our resources. In case of a tumor attached anteriorly, were it exposed by an incision into the anterior wall, it would still be well, we think, to open into the uterine cavity by an incision through the endometrium, in order to secure drainage.]

49. Dr. Woelffler's paper on *total extirpation of the uterus*, read before the German Society of Surgery, was followed by a discussion turning mainly upon the comparative merits of Freund's method by laparotomy and Billroth's vaginal method. The reader approved of Bardenheuer's suggestion, not to close the peritoneal cavity, but keep it open with a drainage-tube. Septicæmia and collapse being the chief dangers, the saving of time in the operation would lessen the latter, and the drain would much reduce the former. ═════ Dr. Schede had employed the vaginal method of late, and had found that he could thus get through more quickly and with fewer assistants. The uterus was readily reached from Douglas's space, and the bleeding could be controlled. His cases had not done well, however, and he had resolved to be more sparing in the use of carbolic acid. The ureter was no more endangered than by Freund's method. ═════ Dr. Czerny had done the vaginal operation successfully in two cases. As to the ureter, if the infiltration extended to the parametrium, it could not be avoided in either Freund's or the vaginal operation.

56. Experiments to explain *the nature of peritoneal shock* were made by MM. Reynier and Richet. They define the condition as that which proves rapidly fatal after injuries to the peritonæum, without other obvious causes than a sort of nervous exhaustion. On injecting a small quantity of boiling water into a rabbit's abdomen, the animal's temperature always fell speedily. The more water was injected, or the greater its heat, the more marked and rapid was the fall of temperature. In case of moderate burning, the animal survived, and after five or six hours the temperature became normal; but, where it was intense, the temperature gradually fell, even as low as about 29° C. [84·2° F.], and in less than twenty-four hours the animal died in a state of adynamia, without suppuration of the peritonæum. Like results were obtained by using small quantities (about fifteen minims) of a concentrated solution of perchloride of iron. The authors conclude that the reduction of temperature is not due to increased loss by surface-radiation, but to a lowering of the calorifacient function. The condition is compared to that of rabbits with the dorsal cord cut—exaggerated excitation of the cord causing the same results as its paralysis. If the animal was previously narcotized with chloral, death was retarded, but not prevented—an effect which the authors explain by supposing that the chloral counteracts the excitation of the spinal cord. The effect of applying the irritant to the intestinal mucous membrane was comparatively trifling.

58. Mr. Thornton briefly reviews the various *methods of dealing with the pedicle in ovariotomy*, and decidedly prefers the "complete intra-peritoneal ligature"—essentially Nathan Smith's method, revived by Tyler Smith. He is convinced that this is *the* method of the future: 1. Because it is universally applicable; 2. Because it is a perfect safeguard against hæmorrhage, when used with sufficient care; 3. Because it is scientific in principle; 4. Because it is neat, cleanly, and speedy in application; 5. Because it allows the incision to be closed completely at once, and thus hastens convalescence; 6. Because it completely obliterates the pedicle stump as quickly as any intra-peritoneal method does, and more quickly than any extra-peritoneal method. The proceeding consists in transfixing the pedicle, cutting the ligatures short, and dropping the stump back into the peritonæum; but there are many ways of carrying it out, and, for the details of the way preferred by himself, the author refers to his article in the "British Medical Journal" for January 26, 1878. To guard against hæmorrhage, the ligature should consist of as many loops as the size and shape of the pedicle may seem to require, and they should all be interlocked. The thread should not be tied too tight, for thus the danger would be incurred of wholly cutting off the supply of blood from the face of the stump. In transfixing, it is better to use small, sharp-pointed needles; large vessels may usually be avoided with them, and, if one is punctured, a small hole is better than a large one, as is apt to result from splitting of the broad ligament when large, blunt needles are used.

59, 60, 61. In this controversy about *the Listerian method in ovariotomy*, Mr. Tait denies that Lister's precautions have contributed in any way to the increase of success in ovariotomy of late. He attributes the result rather to the complete adoption of the intra-peritoneal treatment of the pedicle, and to increased experience on the part of the operators. He gives figures from Dr. Keith's practice, Mr. Wells's, Mr. Thornton's, and his own, summarized from Mr. Thornton's statistics, and claims that they give full support to his position. [We can not see that they do, unless we grant that what they seem to show in the opposite direction is really the result of "increased experience," etc.] ═══ Mr. Thornton remarks that he knows of no statistics that show a difference of thirty-two per cent. between the mortality after intra- and that after extra-peritoneal treatment of the pedicle—which was the difference between that of Mr. Tait's cases in which Listerism was used and that of those in which it was not used; nor can he attribute the difference to experience gained between a first and a second fifty cases. He points out arithmetical errors on the part of Mr. Tait, which, however, seem to have little if any direct bearing upon the question at issue. ═══ Mr. Tait gives a case of tumor of the kidney, in which threatening symptoms occurred after an exploratory incision, as "an instance of the mischievous effects which may arise from the Listerian precautions in abdominal section." The spray was the only one of these precautions used. It was afterward ascertained that by mistake a solution of unknown strength, but probably five per cent., had been employed. The author supposes that this caused peritonitis.

63. Dr. Savage thinks that there is undoubtedly a field for *Battey's operation*, but that, with our present experience, this field is difficult to define. He remarks, however, that the conditions enumerated by Sims as justifying the operation seem to cover the whole ground. The ovaries thus removed will oftener be found diseased than would have been supposed. Of those that he has seen removed, some have been cystic, others enlarged without further change, and still others have been shriveled. In cases where the operation is clearly indicated, it should not be put off too long, for adhesions may be formed that will make it difficult or impossible of performance. Where this is the case, some benefit may perhaps be obtained by lessening the supply of blood to the organ by ligation of the Fallopian tube and adjoining parts. Notes of four cases are given.

64. Dr. Malins gives two successful cases of *Battey's operation*. In one of them, Mr. Lowe examined the ovaries, and reported that he could find nothing that he could call pathological, although the arteries were much thickened in places, as in other ovaries that he had examined. The author remarks that this points to the fact that derangements in function may be the cause of particular forms of ill health, and that no structural disease is necessary to explain a condition of almost constant pain, combined with physical and mental incapacity, such as to make life a burden.

65. Mr. Tait tabulates twenty-six cases in which *Battey's operation* was completed, and two of its incomplete performance, all in his own practice, and promises to give further details in future communications. He thinks the operation far freer from risk than many others that have long been accepted, and far more satisfactory in its lasting results. He remarks, however, that, unless the ovaries can be fully removed, they had better not be touched.

QUARTERLY REPORT ON OPHTHALMOLOGY AND OTOLOGY.

No. III.

By CHARLES STEDMAN BULL, A. M., M. D.,
SURGEON AND PATHOLOGIST TO THE NEW YORK EYE AND EAR INFIRMARY.

Ophthalmology.

1. Burnett, S. M.—A nomenclature of ophthalmology and otology. "Nat. Board of Health Bull.," Suppl. No. 5.
2. Fieuzal.—Thérapeutique usuelle des ophthalmies externes. "Tribune Méd.," June 6, 20, July 11, 1880.
3. Peck, E. S.—A unique case of conjunctival lupus. "Arch. of Med.," June, 1880.
4. Mastin, W. M.—A case of initial syphilitic lesion of the palpebral conjunctiva. "Gaillard's Med. Jour.," July, 1880.
5. Gruening, E.—Congenital coloboma of the eyelids; with a case. "Arch. of Med.," Aug., 1880.
6. Sibille.—Sur un cas de conjonctivite. "Recueil d'Ophtal.," June, 1880.
7. ———.—Discussion über Erkrankungen der Conjunctiva. [Gesellsch. f. Natur- u. Heilk. zu Dresden.] "Deutsche med. Woch.," July 31, 1880.
8. Hirschberg, J.—Ein Fall von metastatischer Ophthalmie. "Centr. f. prakt. Augenheilk.," June, 1880.

9. Engelhardt.—Entzündungen der Conjunctiva. [Gesellsch. f. Natur- u. Heilk. zu Dresden.] "Deutsche med. Woch.," July 17, 1880.
10. Baumgarten, P.—Ueber die tubulösen Drüsen und die Lymphfollikel in der Lidconjunctiva des Menschen. "Arch. f. Ophth.," xxvi, 1.
11. Berthelot, P.—Du traitement du pannus par l'inoculation blennorrhagique envisagée particulièrement en France. Thèse, 1880.
12. Schmidt-Rimpler, H.—Zur Desinfection mittelst Borsäure. "Klin. Monatsbl. f. Augenheilk.," July, 1880.
13. Bonhier, J. S. P.—Du traumatisme comme traitement du pannus. Thèse, 1880.
14. Sichel, A.—Ein Fall von Conjunctivalsyphilid. "Centralbl. f. prakt. Augenheilk.," May, 1880.
15. Burnett, S. M.—A case of acute chemosis. "Arch. of Ophth.," ix, 2.
16. Galvani, J.—Syphilis conjonctivale. "Gaz. Hebdom.," May 21, 1880.
17. Zwingmann, L.—Die Amyloidtumoren der Conjunctiva. Inaug. Dissert., Dorpat, 1879.
18. Cuignet.—À propos de Kératoscopie. "Recueil d'Ophtal.," June, 1880.
19. Parent.—Kératoscopie. "Recueil d'Ophtal.," July, 1880.
20. Leclerc, C.—Des opacités congénitales de la cornée. Thèse, 1880.
21. Alexander.—Ueber die neuroparalytische Hornhautentzündung. "Deutsche med. Woch.," June 26, 1880.
22. Sikora, E. J. B.—Étude critique sur le traitement de l'ulcère rongeant de la cornée. Thèse, 1880.
23. Oppenheimer, H. S.—The anæsthetic effect of cold upon the cornea as a therapeutic measure. "N. Y. Med. Jour.," July, 1880.
24. Webster, D.—A case of mixed astigmatism, supposed to have been caused by the sucking of the eye by an infant. "Med. Record," July 10, 1880.
25. Hocquard, E.—Anatomie et physiologie pathologiques des staphylômes. [Art. iii.] "Annales d'Oc.," May–June, 1880.
26. Steinheim, B.—Contribution to the treatment of keratoconus by eserine. "Arch. of Ophth.," ix, 2.
27. Neelsen, F., and Angelucci, A.—Experimentelle und histologische Untersuchungen über Keratoplastik. "Klin. Monatsbl. f. Augenheilk.," Aug., 1880. Interims-Um.
28. Zehender, W.—Transplantations-Versuch eines Stückchens Hundehornhaut auf eine menschliche Hornhaut. Enucleation. Pathologischer Befund. "Kl. Mon. f. Augenheilk.," May, 1880.
29. Resley, S. D.—Dermoid cyst of cornea. "Phila. Med. Times," June 19, 1880.
30. Roberts, J. B.—Dermoid tumors of the cornea. "Phila. Med. Times," July 31, 1880.
31. Knies, M.—Cancroid von der Corneo-Scleralgrenze. "Kl. Mon. f. Augenheilk.," May, 1880.
32. Guaita, L.—Il collirio d'eserina nelle cheratiti e nel glaucoma. "Ann. di Ottal.," ix, 1.
33. Reynolds, D. S.—Remarks on glaucoma. "Med. Herald," June, 1880.
34. De la Rosa, A.—El glaucoma. "Rev. Espec. de Oftal., Sifil., Dermatol., y Afecc. Urin.," June, 1880.
35. Pechdo.—Glaucome consécutif à un zona ophthalmique. "Recueil d'Ophtal.," June, 1880.
36. Galezowski.—Sur la sclérotomie cruciale dans le glaucome simple. "Recueil d'Ophtal.," July, 1880.
37. Manolescu, N.—De la sclérotomie dans les affections glaucomateuses. "Ann. d'Oc.," March–April., 1880.

38. Leber, T.—Kernstaarartige Trübung der Linse nach Verletzung ihrer Kapsel, nebst Bemerkungen über die Entstehungsweise des stationären Kern- und Schichtstaars überhaupt. "Arch. für Ophth.," xxvi, 1.

39. Camuset, G.—Cataracte d'origine sympathique. "Gaz. des Hôp.," May 27, 1880.

40. Deutschmann, R.—Untersuchungen zur Pathogenese der Cataract. "Arch. f. Ophth.," xxvi, 1.

41. Knies, M.—Cataracta polaris anterior und Cataracta Morgagniana. "Kl. Mon. f. Augenheilk.," May, 1880.

42. Evetsky, E.—On the nature of cataract, and on its treatment with electricity; with the report of a case. "N. Y. Med. Jour.," July, 1880.

43. Heuse.—Zwei Fälle von einseitiger zonularer Cataract mit Knochendefecten an derselben Körperhälfte. "Centralbl. f. prak. Augenheilk.," June, 1880.

44. Chambrelent.—Coloboma des membranes de l'œil et du cristallin: cataracte noire. "Gaz. des Hôp.," May 20, 1880.

45. Hirschberg, J.—Ist Cataract ohne Operation heilbar? "Arch. f. path. Anat. u. Phys.," lxxx, 3.

46. Story, J. B.—Report upon a series of forty-seven cataract operations. "Dublin Jour. of Med. Sci.," Aug., 1880.

47. Kipp, C. J.—On a small series of cataract extractions and other operations on the eye made under most unfavorable hygienic conditions. "Arch. of Ophth.," ix, 2.

48. Borysiekiewicz, M.—Beiträge zur Extraction des grauen Staares der Erwachsenen. "Kl. Mon. f. Augenheilk.," June, 1880.

49. Jones, W.—Operations for cataract by discission from behind. "Lancet," June 12, 1880.

50. Reuling, G.—On the extraction of cataract within the capsule, based on two hundred operations after this method. "Trans. Med. and Chir. Faculty of State of Maryland," 1880.

51. Santos Fernandez, J.—Examen de una catarata en el fondo del ojo despues de dos años de operada. "Crón. Méd.-Quirurg. de la Habana," June, 1880.

52. Schneller.—Zur Lehre von der Ernährung der Netzhaut. "Arch. für Ophth.," xxvi, 1.

53. Rava, G.—Intorno al distacco della retina. "Ann. di Ottal.," ix, 1.

54. Kahler, O.—Ueber septische Netzhautaffectionen. "Zeitschr. f. Heilk.," i, 2.

55. Mengin.—Atrophie des deux papilles à la suite de méningite aiguë—complète d'un côté avec cécité, incomplète de l'autre avec conservation de l'acuité visuelle normale. "Recueil d'Ophtal.," July, 1880.

56. Ayres, W. C.—A case of glioma retinæ, with some noteworthy features. "Arch. of Ophth.," ix, 2.

57. Samelsohn, J.—Zur Topographie des Faserverlaufes im menschlichen Sehnerven. "Centralbl. f. d. med. Wiss.," June 5, 1880.

58. Horstmann, C.—Ueber Neuritis optica. "Deutsche med. Woch.," July 31, Aug. 7, 1880.

59. Noyes, H. D.—Acute myelitis with double optic neuritis. "Arch. of Ophth.," ix, 2.

60. Nettleship, E.—Cases of temporary affection of one optic nerve, comparable to Bell's paralysis of the facial. "Lancet," May 15, 1880.

61. Uhthoff, W.—Beitrag zur Sehnervenatrophie. "Arch. für Ophth.," xxvi, 1.

62. Badal.—Études d'optique physiologique. "Ann. d'Oc.," March–April, May–June, 1880.

63. Smart, W. M.—On the importance of ascertaining and correcting errors of refraction in some diseases of the eye. "Detroit Lancet," July, 1880.
64. Schmidt-Rimpler, H.—Die Accommodationsgeschwindigkeit des menschlichen Auges. "Arch. f. Ophth.," xxvi, 1.
65. Giraud-Teulon.—Physiologie de la lecture. Réponse aux théories de M. Javal. Restitution du mécanisme de la myopie progressive. "Ann. d'Oc.," March–April, 1880.
66. Carter, R. B.—Thomson's ametrometer. "Lancet," July 17, 1880.
67. Baudon.—Amblyopie progressive de nature glaucomateuse. "Recueil d'Ophtal.," July, 1880.
68. Schell, H. S.—Weak eyes. "Med. and Surg. Reporter," July 17, 1880.
69. Chisolm, J. J.—Myopia in its various phases. "Virginia Med. Month.," Sept., 1880.
70. Webster, D.—Near-sight in the young. "Boston Med. and Surg. Jour.," June 17, 1880.
71. Debby, H.—Near-sight in the young. "Boston Med. and Surg. Jour.," June 24, 1880.
72. Abadie.—De la ténotomie partielle des muscles de l'œil, pour combattre la myopie progressive. "La France Méd.," May 29, 1880.
73. Giraud-Teulon.—Sur la ténotomie partielle du muscle droit externe comme moyen à opposer au développement de la myopie progressive. [Soc. de Chirurg., Paris.] "Gaz. Hebd.," June 4, 1880.
74. Abadie, C.—De la ténotomie partielle des muscles de l'œil et de la myopie progressive. "Gaz. Hebd.," July 30, 1880.
75. Abadie, C.—De la ténotomie partielle des muscles de l'œil. "Ann. d'Oc.," May–June, 1880.
76. Fuckel.—Gleichseitige Hemiopie mit Ausgang in Heilung. "Dtsch. Arch. f. kl. Med.," xxii, 3, 4.
77. Lang.—Beobachtungen über Hemianopsie. "Centralbl. f. prak. Augenheilk.," July, 1880.
78. Mauthner, L.—Ueber Seelenblindheit und Hemianopie. "Wien. med. Woch.," June, 26, July 3, 10, 1880.
79. Krenchel, W.—Ueber die Hypothesen von Grundfarben. "Arch. f. Ophth.," xxvi, 1.
80. Prompt, M.—Note sur le défaut d'achromatisme de l'œil. "Arch. de Phys.," Jan.–Feb., 1880.
81. Jeffries, B. J.—Color-blindness. Its examination and prevalence. "Lancet," July 3, 1880.
82. Jeffries, B. J.—Color-blindness among the medical profession. "Brit. Med. Jour.," July 31, 1880.
83. Jeffries, B. J.—Report of the examination of 27,927 school-children for color-blindness. School Document No. 13, Boston, 1880.
84. Landolt.—Troubles de la vision observés dans un cas d'hémiplégie saturnine. "Ann. d'Oc.," March–April, 1880.
85. Lopez-Baralt.—Contribution à l'étude du scotome scintillant ou amaurose partielle temporaire. Thèse, 1880.
86 Schmidt-Rimpler, H.—Zeitbestimmungen bezüglich der Fusion künstlich erzeugter Doppelbilder. "Arch. f. Ophth.," xxvi, 1.
87. Mandelstamm, L.—Ein Fall von monoculärem Doppelt- und binoculärem Vierfachsehen. "Centralbl. f. prak. Augenheilk.," June, 1880.
88. Parent.—Grossissement de la loupe et des images ophthalmoscopiques. "Recueil d'Ophtal.," July, 1880.
89. Zehender, W.—Versuche über den Einfluss des von Merck in Darmstadt krystallinisch dargestellten salicylsauren Physostigmin auf

Pupillenweite und Accommodation. "Kl. Mon. f. Augenheilk.," July, 1880.

90. Fuchs, E.—Homatropinum hydrobromatum. "Centralbl. f. prak. Augenheilk.," June, 1880.

91. Power, H.—The diseases of the eye occurring in connection with pregnancy. "Lancet," May 15, 29, 1880.

92. Hosch, F.—Ueber embolische Panophthalmitis im Puerperium. "Arch. f. Ophth.," xxvi, 1.

93. Bull, C. S.—The effects of malarial poisoning upon the eye. "St. Louis Courier of Med.," June, 1880.

94. Parinaud.—Des suppurations de la paupière inférieure et de la région du sac lachrymal d'origine dentaire. "Arch. Gén. de Méd.," June, 1880.

95. Uhthoff, W.—Zur Casuistik der Augenerkrankungen in Folge von Infectionskrankheiten. "Deutsche med. Woch.," June 5, 1880.

96. Knies, M.—Argyria oculi. "Kl. Mon. f. Augenheilk.," May, 1880.

97. Mooren und Rumpf.—Ueber Gefässreflexe im Auge. "Centralbl. f. die med. Wiss.," May 8, 1880.

98. Warlomont.—Matériaux pour servir à l'histoire de l'énervation. "Ann. d'Oc.," March-April, 1880.

99. Knapp, H.—Further remarks on optico-ciliary neurotomy and neurectomy. "Arch. of Ophth.," ix, 2.

100. Burnett, S. M.—On optico-ciliary neurotomy—with a case. "Phila. Med. Times," Aug. 14, 1880.

101. Palmer, T. L.—Optico-ciliary neurectomy. "Canada Lancet," Sept., 1880.

102. Boyer, J. F.—De l'extirpation et de l'énucléation de l'œil. Thèse, 1880.

103. Outin.—Contribution à l'étude de la canthoplastie externe. Thèse, 1880.

104. Bonagente.—Nuovo processo di tarsorafia ideato ed eseguito dal Prof. Businelli, direttore della clinica oculistica di Roma. "Giorn. Internaz. delle Sci. Med.," ii, 8, 1880.

105. Nettleship, E.—Clinical lecture on some effects of blows upon the eyeball. "Lancet," June 19, 1880.

106. Holmes, E. L.—A remarkable case of injury of both eyeballs. "Arch. of Ophth.," ix, 2.

107. Oglesby.—Cases of injury to the eye. "Lancet," July 24, 1880.

108. Bull, C. S.—Certain traumatic lesions of the bones of the orbit, with caries and perforation. "Am. Jour. of the Med. Sci.," July, 1880.

109. Carré.—Rupture de la sclérotique à la partie inférieure, avec arrachement complet de l'iris qui s'est logé sur la conjonctive, sans luxation du cristallin. "La France Méd.," May 29, 1880.

110. Samelsohn, J.—Traumatische Aniridie und Aphakie mit Erhaltung des Sehvermögens nebst Bemerkungen über die mediale Gesichtsfeldgrenze. "Centralbl. f. prakt. Augenheilk.," June, 1880.

111. Knapp, H.—Two cases of removal of fragments of iron from the vitreous, in the one with a scleral-flap section, in the other with a magnet. "Arch. of Ophth.," ix, 2.

112. Miles, C. W.—Removal of foreign body lodged in the retina. "Am. Pract.," June, 1880.

113. Pooley, T. R.—On the detection of the presence and location of steel and iron foreign bodies in the eye by the indication of a magnetic needle. "Arch. of Ophth.," ix, 2.

114. Prout, J. S.—Removal of a piece of steel from the vitreous. Preservation of the eyeball and good perception of light. "Arch. of Ophth.," ix, 2.

115. Knapp, H.—Contribution to the pathology of the frontal sinuses. "Arch. of Ophth.," ix, 2.

116. Snell, S.—Note on the use of large probes in the treatment of lachrymal obstruction. "Lancet," July 31, 1880.

117. Holmes, E. L.—An unusual opening into the lachrymal sack. "Arch. of Ophth.," ix, 2.

118. Puel, A.—De la dacryocystite et de son traitement. Thèse, 1880.

119. Heisrath, F.—Ueber die Abflusswege des Humor aqueus, mit besonderer Berücksichtigung des sogenannten Fontana'schen und Schlemm'schen Kanals. "Arch für Ophth.," xxvi, 1.

120. Chevallereau, A.—Recherches sur les paralysies oculaires consécutives à des traumatismes cérébraux. Thèse, 1880.

121. Meden, A.—Ein Fall von bilateraler Associations-Parese der Rect. super. et obliq. inferiores, mit Auftreten von klonischen Zuckungen in den übrigen Augenmuskelgruppen. "Centralbl. f. prak. Augenheilk.," July, 1880.

122. Ulrich, R.—Zur Aetiologie des Strabismus convergens. "Kl. Mon. f. Aug.," May, 1880.

123. Boucheron.—Thérapeutique du strabisme, de sa guérison par les mydriatiques ou par une nouvelle opération de strabotomie. [Acad. de Méd., Paris.] "Gaz. Hebdom.," July 9, 1880.

124. Green, J.—Cross-eye; its origin, prevention, and treatment. "St. Louis Med. and Surg. Jour.," Aug. 5, 1880.

125. Knies, M.—Contributions to the knowledge of the diseases of the uveal tract. "Arch. of Ophthal.," ix, 2.

126. Mauz, W.—Zwei Fälle von Mikrophthalmus congenitus, nebst Bemerkungen über die cystoide Degeneration des fötalen Bulbus. "Arch. für Ophth.," xxvi, 1.

127. Samelson, A.—Ein ungewöhnlicher Fall persistirender Pupillarmembran. "Centralbl. f. prak. Aug.," July, 1880.

128. Spalding, J. A.—A case of intra-cranial tumor, with symptoms chiefly on the part of the eyes, seen during a period of five years. Death. Autopsy. "Arch. of Ophth.," ix, 2.

129. Guéniot.—Tumeurs symmétriques des globes oculaires chez un enfant de deux ans. "Bull. et Mém. de la Soc. de Chir.," July 5, 1880.

130. Bradley, J.—Melanotic sarcoma of the eyeball. "Detroit Lancet," June, 1880.

131. Manfredi, N.—Esame anatomico di un piccolo settore di neoplasia iridocigliare. "Ann. di Ottal.," ix, 1.

132. De Vincentiis, C.—Contribuzione allo studio della lepra oculare. "Ann. di Ottal.," ix, 1.

133. Pelissier, C.—Considérations anatomo-physiologiques sur l'appareil musculaire de l'iris. Thèse, 1880.

134. Samelson, A.—Die Ciliarfortsätze bei Irideremie und Aphakie. "Centralbl. f. prak. Aug.," July, 1880.

135. Chisolm, J. J.—Salicylate of sodium in the treatment of iritis. "Arch. of Ophth.," ix, 2.

136. v. Schroeder, T.—Beitrag zur Kenntniss der Iritis syphilitica. Inaugural Dissertation, St. Petersburg, 1880.

137. Ryerson, G. P.—Remarks on syphilitic iritis. "Canada Lancet," June 1, 1880.

138. Kipp, C. J.—On gonorrhoic irido-choroiditis. "Med. Record," June 26, 1880.

139. Hotz, F. C.—Die Entropium-Operation am unteren Augenlide, besonders bei alten Leuten. "Kl. Mon. f. Aug.," May, 1880.

140. Hirschberg, J.—Ein Fall von pulsirendem Exophthalmus. "Centr. f. prak. Aug.," July, 1880.

141. Galezowski.—Traitement de la sclérite. "Recueil d'Opht.," June, 1880.
142. Oglesby, R. P.—Nystagmus. "Brain," Part x, July, 1880.
143. Carmalt, W. H.—Some limits in the use of the ophthalmoscope. "Proc. Conn. Med. Soc.," 1880.
144. Warlomont.—Ciseaux-pinces à écrasement. "Ann. d'Oc.," March-April, 1880.
145. Parent.—Œil artificiel. "Bull. et Mém. de la Soc. de Chir.," June 5, 1880.
146. Theobald, S.—A new eye-bandage. "Arch. of Ophthal.," ix, 2.

8. Hirschberg reports a case of *metastatic embolic panophthalmitis* in a patient with tabes dorsalis and suppurative cystitis, preceded by an epileptiform attack. On the second day the panophthalmitis was in full blast, there were high fever, headache, semi-coma, but no paralysis. Death occurred on the third day. No autopsy. Hirschberg thinks that some septic matter reached the circulation from the bladder and caused an embolus in the skull and in the right eye.

12. Schmidt-Rimpler's experiments with *boracic acid as a disinfectant in purulent inflammation of the conjunctiva and lachrymal sack* were performed by inoculation on rabbits' corneæ. He placed small amounts of infecting purulent secretion from an inflamed lachrymal sack in a saturated or four-per-cent. solution of boracic acid, and left them there for varying lengths of time. The pus coagulated in small flocculi. This secretion was subsequently introduced between the corneal lamellæ of a rabbit by means of a paracentesis needle. It was demonstrated that the four-per-cent. solution of boracic acid diminished the infecting power of the pus very markedly, and if the latter was left longer in the solution, it was rendered completely inert. Boracic acid does not act so rapidly, however, as the officinal chlorine-water.

14. Sichel describes an ulcerated papular *syphilide of the ocular conjunctiva* of the right eye, in a young man, aged twenty-eight. There was an injection of the ocular conjunctiva toward the inner canthus, and in the center of it a small tumor of oval shape, as large as a barleycorn, reddish-yellow in color, and looking something like a phlyctænula. There was no secretion from the conjunctiva. The tumor lay between the insertions of the rectus inferior and the rectus internus, and reached to the limbus corneæ. The growth afterward assumed the shape of a horseshoe, with the concavity toward the cornea. There was a papular syphilide on the arms and body, also the scar of an old ulcer just behind the glans penis. The interval between the infection and the appearance of the conjunctival syphilide is not given. [Sichel seems to be by no means acquainted with the literature of the subject, as may be seen from the meager bibliography given. In a paper by the reporter, published in the "Am. Jour. of the Med. Sci.," Oct., 1878, a number of cases of conjunctival syphilis are given. They are not so very rare as Sichel thinks.]

27, 28. Neelsen and Angelucci have taken up the subject of *transplantations of the cornea*, in whole or in part, and their observations have been made upon quite a number of experiments upon animals. They have drawn the following conclusions from their own experience: In the majority of cases, the transplanted portion of cornea partially sloughs, while what is left becomes inclosed in opaque cicatricial tissue. A permanent adhesion, with maintenance of the transplanted piece, is possible only when the latter is nourished not only from its margin, but also from its inner surface by old or newly formed subjacent tissue. Thus, in a successful case of transplantation, there lies upon the inner or under surface of the transplanted portion an opaque layer, which eventually so diminishes the transparency of the graft itself that the final result is practically a failure. It would also appear from their experiments that an artificial, flat or shallow corneal wound may, without the transplantation of a flap, be filled by transparent tissue, which probably comes from the conjunctiva. ═════ Zehender gives the results of a microscopical examination of an eye into the cornea of which a piece of dog's cornea had been transplanted, and which was subsequently enucleated. The eye was found filled with coagulated blood, and the retina was totally detached and atrophic. The ciliary body was atrophied. In the trephine opening in the cornea lay the anterior edge of the retina imbedded in a fibrous clot that contained but few cells, and which spread out like a fungus over the cornea. The wounded surfaces of the cornea were covered with young epithelium, which extended up somewhat upon the clot. There was no recognizable trace of the inserted piece of dog's cornea.

32. Guaita, in his article on *eserine in keratitis and glaucoma*, advises the use of the drug in the following forms of keratitis: 1. In asthenic corneal ulcers; 2. In the asthenic suppurative keratitis of scrofulous and cachectic subjects; 3. In infecting rodent ulcer; 4. In neuro-paralytic keratitis; 5. In penetrating wounds of the cornea. He thinks it contraindicated—1. In asthenic suppurative keratitis; 2. In superficial keratitis or pannus; 3. In phlyctænular keratitis; 4. In purulent infiltration of the corneal parenchyma; 5. In abrasions and superficial wounds of the cornea. He thinks it useful in acute glaucoma, but not in the chronic form of the disease. In absolute glaucoma it is useless, and it is contraindicated in glaucomatous conditions dependent upon irido-choroiditis, and in glaucoma complicated with posterior synechiæ.

36. Galezowski thinks that *crucial sclerotomy in glaucoma* will prove more satisfactory because the incision is made through the anterior channel of filtration at various points. He divides the sclera and cornea with a Graefe's knife, for a distance of half a centimetre in each, in the horizontal meridian on both sides of the cornea, and also in the vertical meridian on both sides. If the eyeball is deeply set in the orbit, the incision through the upper margin of the cornea must be made with a knife that has an elbow. Eserine is then instilled, and a pressure bandage is applied. The anterior chamber is reëstablished in five or six days. His results have been very satisfactory, and he considers that the crucial incision is preferable to iridectomy in its immediate and lasting effects.

37. Manolescu's article is strongly in favor of *sclerotomy in glaucoma*. He draws a parallel between iridectomy and sclerotomy, and then discusses the curative action of the latter, with reference to the theory of filtration through the resulting cicatrix, and to that of reflex nervous influence. He then describes his method of operating in every case: the patient is never anæsthetized, and eserine is always instilled a number of times during the day preceding the operation. The incision is made with Graefe's narrow knife. He next gives the indications for performing sclerotomy: 1. In absolute glaucoma, in painful eyes which he hesitates to enucleate; 2. In eyes attacked with sympathetic irido-choroiditis, in which glaucomatous symptoms have appeared, and in which iridectomy is impossible because the iris is adherent to the lens throughout; 3. In chronic simple glaucoma; 4. In hæmorrhagic and hydrophthalmic glaucoma; 5. In the prodromal stage of glaucoma; 6. In secondary glaucoma, as after dislocation of the lens or serous choroiditis. He asserts that sclerotomy is relatively very innocuous in cases of hæmorrhagic or hydrophthalmic glaucoma. After the operation, a simple antiseptic bandage is applied with slight compression. Patients may carry on their occupations almost immediately. Another advantage claimed for sclerotomy is, that it can be repeated indefinitely without injuring either the cornea or the iris. The paper closes with a tabulated analysis of forty-one cases.

47. Kipp reports ten cases of *cataract extraction*, besides a number of other operations, done under the most unfavorable surroundings, in a small room in a general hospital, in which the air was polluted by the exhalations from the skin and lungs of a large number of patients, by the discharge from suppurating wounds, and by decomposing excreta. Notwithstanding these conditions, in all of his cases the section healed by first intention, and in only one was there any anomalous reaction. Kipp concludes from this experience that the impure air of hospitals has little or no influence upon the healing process after operations on the eye, even when, as in all these cases, no antiseptic methods of operating or treatment are adopted.

49. In this *operation for cataract by discission from behind*, Jones uses a curved, spear-headed cataract needle, and pierces the sclera on the temporal side, about one-sixth of an inch back of the corneal margin, and halfway between the insertions of the external and the inferior recti muscles. He pushes the needle into the vitreous toward the center of the globe, and then turns its point against the posterior capsule and freely lacerates it. The needle is then withdrawn. He performs the operation in all sorts of cases, even in those of senile cataract in very old people, and without any bad results.

54. Kahler describes cases of *inflammation of the eye analogous to a septic process*, but which are relatively benign, inasmuch as the affection is limited to the retina, without there being any infiltration of the vitreous or any choroiditis. One observation included the post-mortem examination of a septic retinitis, the patient having died of acute meningitis and hypostatic pneumonia. A second was the clinical observation of a case of chronic septicæmia from gangrenous periostitis of the superior maxilla, in which septic retinitis was diagnosticated. A third was a case of septic embolic ophthalmia from gangrene of the finger, purulent meningitis, endocarditis, and embolic nephritis.

75. Abadie advises *partial tenotomy of the external rectus muscle in cases of pure muscular asthenopia* without consecutive permanent strabismus, the object being simply to weaken the muscle, and not to displace it backward. He opens the conjunctiva in the usual way, slides the strabismus hook under the tendon, and carefully wipes away any blood that flows, however little, in order that he may see the tendon clearly. Then with a pair of scissors with sharp points he divides the tendon by little cuts, commencing at the side of the free border of the hook, and stopping when near the center of the tendon. He then divides the tendon on the other side, leaving a few median fibers adherent to the sclera. These suffice to prevent the displacement of the muscle backward. By this method he has succeeded in removing the asthenopic symptoms in cases where prismatic glasses had failed. This partial tenotomy has the advantage of being a method of treatment applicable to any case as soon as the insufficiency of the internal recti muscles becomes manifest, and thus the progress of the myopia may be combated most efficaciously.

92. Hosch gives an additional case of *panophthalmitis in the puerperal woman*, with a full microscopical examination. Puerperal fever set in on the sixth day after delivery, and two days afterward the first symptoms appeared in the left eyelids. Two days later vision was entirely lost in this eye, and the right eye became affected. Both eyes showed irido-choroiditis with extensive pupillary and deep exudations, and the left eye protruded from the orbit. Death occurred on the tenth day after the beginning of the fever. Hosch was not able to tell from the microscopic examination whether the disease had begun in the choroid or in the retina. In the vitreous of each eye there were numerous leptothrix fibers, showing the abundant development of a fungoid growth. He also found great numbers of what he considered to be micrococci in some of the retinal vessels, which corresponded exactly with the fungus thrombi found in septic processes by many observers. These same bodies existed in great numbers in the uriniferous tubules of the kidneys. Hosch agrees with Leber in differentiating the disturbance in the circulation caused by the embolism from that due to the specific irritation of the plugs. The rapid development of pus throughout the entire retina, the uveal tract, the vitreous, the cornea, and even the lens, he regards as due to the diapedesis of the white blood-corpuscles under the influence of infectious substances in the blood current, which act upon the vascular walls. These irritating substances are the bacteria. Hosch does not help us, however, in clearing up the obscurity which still hangs round the mode of action of these fungoid structures in destroying animal tissues.

94. Parinaud's paper on *suppuration in the lower lid due to dental caries* is a very interesting one. He thinks that alteration of the temporary or permanent teeth may provoke suppuration in the lower lid on a level with the orbital margin, or in the region of the lachrymal sack, where it simulates tumor or fistula of the sack. The course followed by the pus arising from an alveolo-dental periostitis is intra-osseous, and hence difficult to discover. He thinks that there is a variety of suppuration around the eye, of dental origin, peculiar to children, due to the arrangement of the alveoles of the first and second dentition. In the adult a suppurative process of dental origin is occasionally met with in front of the lachrymal sack. In these cases the pus developed in the alveole may first penetrate into the maxillary sinus, where it provokes inflammation, and secondarily leads to the formation of a cutaneous fistula at the internal canthus; in another series of cases, the lachrymal passages are free, the maxillary sinus is not involved, and the connection between the abscess or fistula at the internal canthus and the dental process can not be discovered. The vascular canals which open constantly by one or two orifices upon the ascending ramus of the maxilla, in front of the lachrymal groove, and which communicate also with the foramina of the alveoles, explain the occurrence of these suppurative processes, which in so many instances are accompanied by necrosis of the orbital margin.

99. Knapp discusses the advantages and disadvantages of *optico-ciliary neurotomy and neurectomy*. The worst feature of the operation is the partial or total return of sensibility in the cornea. He thinks that it is still unsettled whether divided and reunited nerves are capable of transmitting sympathetic irritation. He cites briefly six cases in which the operation was performed. The first was a case of injury in the ciliary region, with sympathetic ophthalmia of four weeks' duration, and neurectomy eight weeks after the injury, with decided improvement in the sympathetic ophthalmia. The second case was one of painful, absolute glaucoma, with cessation of all pain after the neurectomy. The third case was one of cyclitis dolens. The fourth case was one of chronic uveitis from a piece of metal remaining in the ciliary region for seven months. The fifth case was an enlarged blind eye from irido-choroiditis and opaque cornea. After the neurectomy there was gangrene of the cornea and sclera at the site of the wound. The sixth case was a chalky cataract in an eye atrophic from traumatic irido-choroiditis. The cornea was only partially anæsthetic.

111. Knapp's first case was the *extraction of a splinter of steel from the eye* by a scleral-flap section, after it had lain in the ciliary body seven months, producing chronic uveitis. There was no irritation from the operation, the incision beginning about 4 mm. behind the corneal margin and extending along the lower edge of the internal rectus muscle almost to the equatorial region. A magnet attached to a Stöhrer's battery was first employed, but it failed to bring away the foreign body, which was subsequently extracted with forceps through the enlarged wound. Vision sank from $\frac{15}{200}$ to the ability to count fingers at 2 feet, and the eyeball continued to atrophy. As there was some photophobia in the other eye, Knapp performed optico-ciliary neurectomy fifty-two days after the removal of the foreign body. ===== The second case was the removal of a piece of steel from the vitreous by means of an electro-magnet, in an eye that was the seat of acute purulent irido-choroiditis. An incision about 6 mm. long was made between the internal and inferior recti. After several trials, the foreign body was attracted toward the opening, and was removed. The eye showed no special sign of inflammatory reaction, but the suppurative process went on to its final termination.

138. Boucheron's *operation for squint* consists: 1. In a vertical section of the conjunctiva and subjacent capsule about 8 mm. from the corneal margin; 2. The introduction of the strabismus hook beneath the tendon of the muscle; 3. Traction of the capsulo-conjunctival flap in one direction and of the tendon of the muscle in the other, which renders the insertion or pre-muscular adhesion of the muscle to the subjacent capsule prominent, and these are then to be divided; 4. Complete tenotomy of the muscle; 5. Conjunctival suture for closing the wound, or capsulo-conjunctival suture if it is necessary to diminish the effect of the operation.

139. Hotz thinks that the ordinary *operations for entropium of the lower lid* are irrational, and hence so often unsuccessful. He thinks it unnecessary to excise any portion of skin, and prefers to draw the skin of the lid downward and fasten it to the lower margin of the tarsus. He makes an horizontal incision through the skin from the inner to the outer canthus, from 4 to 6 mm. below the lid-margin. An assistant then draws the upper edge of the wound upward, while the surgeon draws the lower one downward with the index finger of the left hand. The orbicularis is thus exposed and put on the stretch, and the fibers of the pars ciliaris are separated from those of the pars orbitalis by the point of the knife, and the lower border of the tarsus is laid bare. Next, those muscular fibers which originally covered the lower tarsal border must be separated from the pars ciliaris with a fine pair of forceps, and excised from the inner to the outer canthus. The skin of the lid can now be united directly to the tarsus and the wound closed. Hotz uses four sutures of black silk, 5 mm. apart. The curved needle is introduced first through the skin close to the upper edge of the wound, then through the tarsus downward, so that its point appears through the fascia below the tarsus, and it is then brought out again through the skin close to the lower edge of the wound. Care must be taken to avoid including in the loop any of the fibers of the pars orbitalis of the orbicular muscle. The inflammatory reaction is very slight, and the stitches may be removed on the third day.

140. Hirschberg's case was that of a woman, aged thirty-five, with very marked *pulsating exophthalmus* of the left eye, of ten days' duration. The eyeball was immovable, the cornea was anæsthetic, and vision was reduced one half. There was a well-marked bruit, isochronous with the radial pulse. The fundus was normal. There were left facial paralysis and constant headache. Ten days later, complete amaurosis suddenly ensued. Injections of ergotin subcutaneously into the orbit put a stop to the pulsations, but they returned two days later. The left common carotid was then tied, and the pulsations ceased permanently. Seventeen days later, the exophthalmus had disappeared, but the immobility, anæsthesia, and blindness of the eye remained. Four months later, some mobility had been regained in the eye, and the facial paralysis had nearly disappeared. There was atrophic excavation of the optic nerve, with remains of retinal hæmorrhages.

OTOLOGY.

1. **Gellé.**—Étude expérimentale des fonctions de la trompe d'Eustache. "Gaz. Méd. de Paris," June 26, 1880.
2. **Buck**, A. H.—Unnatural patency of the Eustachian tube. "Am. Jour. of Otol.," July, 1880.
3. **Rumbold**, T. F.—The method of air supply to the middle ear; the density of the air in this cavity; the cause of the uniform concavity of the membrana tympani, and the functions of the Eustachian tube. "St. Louis Med. and Surg. Jour.," Aug. 20, 1880.
4. **Hauerwaas.**—Beitrag zur Anatomie des Schläfenbeins. "Monatsschr. f. Ohrenheilk.," May, 1880.
5. **Bell**, A. G.—Experiments relating to binaural audition. "Am. Jour. of Otol.," July, 1880.
6. **Gardiner-Brown**, A.—A new standard of measurement for hearing-power by comparison with the sense of touch. "Lancet," July 24, 1880.
7. **Bader**, E. C.—Report on one hundred cases of ear disease. "Lancet," Aug. 7, 1880.
8. **Sexton**, S.—Tinnitus aurium. "Am. Jour. of Otol.," July, 1880.
9. **Fugua**, W. M.—Accumulation of cerumen simulating post-nasal catarrh. "Am. Pract.," Sept., 1880.
10. **Gruber**, J.—Ueber einige neuere Behandlungsweisen des Ohrenflusses. "Allg. Wien. med. Zeit.," July 13, 20, 27, 1880.
11. **Field**, G. P.—An analysis of five hundred cases of perforation of the membrana tympani. "Med. Press and Circular," Aug. 4, 1880.
12. **Blake**, C. J.—Manometric cicatrix of the membrana tympani. "Am. Jour. of Otol.," July, 1880.
13. **McKeown**, W. A.—On a new method of treatment of relaxation of the membrana tympani. "Dublin Jour. of Med. Sci.," June, 1880.
14. **Dills**, T. J.—A case of rupture of the drum-head from a box on the ear. Rapid and complete recovery. "Arch. of Otol.," ix, 2.
15. **Barr**, T.—Three cases of cerebral abscess consequent upon suppurative disease of the middle ear. "Glasgow Med. Jour.," July, 1880.
16. **Allport**, F.—A case of probable abscess of the brain following after and perhaps dependent upon an acute inflammation of the middle ear. "Am. Jour. of Otol.," July, 1880.
17. **Thompson**, H.—Clinical lecture on a case of otitis with abscess of the cerebellum and pyæmia. "Med. Times and Gaz.," May 8, 1880.
18. **Seely**, W. W.—Acute otitis media suppurativa. "Cincinnati Lancet and Clinic," July 3, 1880.
19. **Sturgis**, F. R.—On the affections of the middle ear during the early stages of syphilis. "Boston Med. and Surg. Jour.," June 3, 1880.
20. **Spencer**, H. N.—The dry treatment in suppuration of the middle ear. "Am. Jour. of Otol.," July, 1880.
21. **Hotz**, F. C.—The indications for an early trepanation of the mastoid process in acute purulent otitis media with implication of the mastoid cells. "Arch. of Otol.," ix, 2.
22. **Browne**, E. A.—A modified inflater for the middle ear. "Lancet," Aug. 14, 1880.
23. **Foulis.**—Method of post-mortem examination of the middle ear. [Glasgow Path. and Clin. Soc.] "Glasgow Med. Jour.," Aug. 1880.
24. **Burnett**, S. M.—A case of primary external inflammation of the mastoid. "Arch. of Otol.," ix, 2.

25. Guye.—Le vertige de Ménière. "Rev. Mens. de Méd. et de Chir.," May, 1880.
26. Moos, S.—On the histological alterations of the labyrinth in hæmorrhagic pachymeningitis. "Arch of Otol.," ix, 2.
27. Knapp, H.—On heredito-syphilitic affections of the ear. "Arch. of Otol.," ix, 2.
28. Politzer, A.—Zur Behandlung der Ohrpolypen. "Wien. med. Woch.," July 31, 1880.
29. McLeod, D.—Foreign bodies in the ear. "Brit. Med. Jour.," July 10, 1880.
30. Garrigou-Desarènes.—Sur les audiphones de M. Rhodes et de M. Colladon. "La France Méd.," May 26, 1880.
31. Turnbull, L.—A comparison between the audiphone, dentaphone, etc., and the various forms of ear-trumpet for the deaf. "Phila. Med. Times," Aug. 28, 1880.
32. Blake, C. J.—The membrana-tympani telephone. "Am. Jour. of Otol.," July, 1880.
33. Jacquemart.—Nouvel otoscope. "Progr. Méd.," May 22, 1880.
34. Upson, C. R.—A new aural douche. "Med. Record," June 19, 1880.

1. The object of Gellé's experiments on *the functions of the Eustachian tube* was to determine: first, whether the tube was constantly gaping, like the nostrils, or whether it was closed by the approximation of its walls, like the urethra; and, secondly, what part was played by the tubal muscles in the circulation of air toward the tympanic cavity. The experiments are very numerous, and an abstract can not be made satisfactorily.

4. *Ectatic conditions of the veins upon the inner surface of the temporal bone* are not uncommon. They occur in the fossa jugularis and at the anterior end of the sinus sigmoideus. In 500 temporal bones examined by Hauerwaas, this condition of venous ectasia was found in 14. He gives a table of the various measurements of the ectasiæ in each case.

5. Bell's experiments upon *binaural audition* were instituted to determine whether the stereophonic phenomena of binaural audition might be produced artificially with the telephone, in the same manner as the peculiarities of binocular vision are produced with the stereoscope. As the final result of the experiments, it was found that the observer could determine with tolerable accuracy the latitude of a sound made near a given point, but that he had no idea whatever of its longitude. A series of experiments was next instituted to determine whether the telephone might afford a means of ascertaining to what degree the human ear normally had the power of appreciating the direction of sound. From these experiments it was seen that perception of the direction of a source of sound was less perfect by a single ear than by both ears. The direction of sound is more accurately defined, the more it approximates to the axial line of the ears.

6. Gardiner-Brown, in *testing the hearing power*, takes a middle C tuning-fork, and, having struck it, places its stem over the upper part of the mastoid process, a coin intervening. He ceases at a certain point to feel the vibrations, owing to their lessening amplitude. The patient is to raise his hand as a signal the moment *he* ceases to *hear* it, and the interval between this and the standard point, where the surgeon ceases to feel the vibrations, is to be estimated in half seconds, and the number noted down, with the sign minus or plus prefixed according as the patient's hearing falls short of or exceeds the standard point.

12. Blake reports a case of *manometric cicatrix in the membrana tympani* in a woman, aged forty, in whom during inflation the cicatrix was seen to move outward for a distance considerably less than one millimetre, im-

mediately relaxing on the suspension of the inflation. It was seen to move regularly with the natural respiration—with each inspiration making an excursion inward, and with each expiration a corresponding movement outward. Hurried and forced respiration increased both the rapidity and the degree of the movement of the cicatrix.

15. Barr's first case of *cerebral abscess following suppurative disease of the middle ear* showed at the autopsy a large abscess in the left temporal lobe of the brain, with thickened dura over the tegmen tympani, but no opening in the bone communicating with the tympanum, and no caries in any part of the temporal bone. ═══ In the second case there was an abscess in the temporo-sphenoidal lobe, and the dura was adherent to the temporal bone. There were two carious openings into the mastoid cells communicating with the external auditory canal, and one through the tegmen tympani. There was a fourth hole through the squamous part of the temporal bone. ═══ In the third case, the abscess was beneath the dura, in contact with the inner surface of the mastoid process and the posterior surface of the petrous bone. There was no caries in any part of the temporal bone.

19. *Affections of the middle ear during the early stages of syphilis* may appear independently of any other lesion of syphilis, or in connection with and extension from symptoms in the pharynx, such as mucous patches, or the infiltration of mucous membranes. The symptoms are, pain of a dull character, with occasional sharp twinges, and of a marked periodicity. Sometimes the *otitis media* does not appear until the eruptions on the skin and mucous membranes have passed off. Sturgis cites three cases of this form of ear disease.

20. Spencer advises *the dry treatment of suppurative discharges from the middle ear*, in place of the hot-water douche and astringent solutions generally used. The dry cleansing with absorbent cotton and the dry dressing with the same protect the wound from the air, at the same time that they attract the discharge from the middle ear, and cause a gentle stimulation which conduces to healing.

21. Hotz thinks that the examination of the periosteum plays an important rôle in the proper *management of acute affections of the mastoid.* He reasons that, when, in the course of an acute purulent *otitis media*, the mastoid region becomes implicated, as shown by pain, redness, swelling, and tenderness to the touch, and these symptoms are not speedily relieved by leeches and poultices, an exploratory incision should be made down to the bone. If marked symptoms of acute periostitis are found, our surgical interference should end with the incision; but, if the periosteum is found of firm texture, of normal thickness, and strongly adherent to the bone, the incision should immediately be followed by perforation of the bone. [This method of procedure is not so *entirely* unknown or ignored by aural surgeons as the reader would infer from Hotz's manner of stating it.]

22. Foulis's *method of post-mortem examination of the middle ear* is as follows: He splits the petrous bone with a chisel along a line parallel with the squamous plate, and falling on the outer slope of the eminence caused by the superior semicircular canal. The tympanum and the mastoid cells are thus opened, and the stapes is separated from the incus.

25. After reviewing the observations and experiments of other authors and his own, Guye comes to the following conclusion: 1. In a general sense, *Ménière's disease* includes every case of vertigo caused by abnormal irritation of the nervous apparatus of the semicircular canals. 2. In a more restricted sense, Ménière's disease consists in an inflammatory state either of the semicircular canals or of the middle ear, which excites a vertigo that is more or less continuous. 3. Cold and catarrh of the tympanic cavity play a great part in the etiology of the disease. 4. The majority of the cases are secondary to catarrh or to inflammation of the tympanic cavity or of the mastoid. 5. The vertigo is accompanied or preceded by sensations of rotation, which have a constant order; they begin by a sense of rotation round a vertical axis, always in the sense of the diseased organ; next follows a sense of rotation round a frontal axis, forward and backward; then the vertigo becomes general, and the patient falls, with or without loss of consciousness; sometimes he vomits. 6. These symptoms are sometimes excited by means used for treatment, like inflation. 7. In some cases the vertigo is accompanied by loud subjective noises, while in others there is a constant low hum. 8. Ménière's disease often causes in children a state resembling chorea, and in adults chronic contractions of the muscles of the face and body. 9. The disease is cured sometimes without, sometimes with, loss of hearing. 10. As regards internal treatment, quinine merits the most confidence. It sometimes causes a cessation of the buzzing which exists, while it increases the deafness.

26. Moos gives the results of a very careful general and microscopic *examination of the petrous bones of a patient who had died of hæmorrhagic pachymeningitis.* In the right petrous bone there was much pus in the external auditory meatus, and a large central perforation of the drum-head. In the left petrous bone, the membrana tympani was retracted like a funnel, and very opaque. In the labyrinth there were no hæmorrhages visible to the naked eye, but under the microscope irregular hæmorrhagic infiltration was seen throughout the labyrinths of both ears. In the semicircular canals there was the intra-cellular metamorphosis of the red blood-corpuscles. The lymph-channels were also proved to have taken part in the absorption of extravasations of blood. The pigment that was not absorbed was found mostly immediately adjoining the blood-vessels, and sometimes in the adventitial sheath. Microscopical evidence of inflammation was also furnished by the sequelæ of the incomplete absorption of hæmorrhagic infiltrations which were scattered through the membranous labyrinth of the left side. The evidences of atrophy and degeneration were much more pronounced, especially in the right labyrinth. The blood-vessels were completely filled with blood-corpuscles. The arteries showed traces of cellular infiltration and thickening of the walls. Their structure was often indistinct in consequence of fatty degeneration. There were signs of capillary fat-embolism in the labyrinth of each petrous bone, its source being probably due to the bed-sores. In places, there were marked atrophy and degeneration of the connective-tissue and epithelial layers of the membranous labyrinth. Besides the granular cells characteristic of this process, there were also visible colloid and hyaline globules. The fatty degeneration occurs in smaller and larger patches. The strongly granular quality of the cellular protoplasm of the epithelium must be regarded as the incipient stage of fatty degeneration. The nerve elements were characterized by an ample formation of granulated fat-cells, metamorphosis of the medulla into drops of myeline, crumbly masses, or fine granules of fat, even to complete disappearance of the medulla. The ganglion cells took part also in the alteration of the nerves. Moos sums up the results as follows: "The auditory disturbances in hæmorrhagic pachymeningitis are based on hæmorrhages by diapedesis into the labyrinth, which accompany the meningeal hæmorrhages, and which, in repeated attacks, may lead to the total destruction of the function. The latter is caused by atrophic and degenerative processes in the labyrinth, in which both the trunk of the auditory nerve and its terminal expansion are pre-eminently involved, and in the occurrence of which the disturbances in the circulation of blood and in the nutrition of the tissues form an important factor."

27. Knapp reports two cases of *parenchymatous keratitis with catarrhal otitis media and heredito-syphilitic otitis interna.* The first was in a girl, aged five, with both corneæ involved, in whom, while the eyes were getting better, the hearing in both ears rapidly became impaired. There was no pain in the ears, no noises, but some headache. Her gait was unsteady and staggering; she was frequently dizzy and apt to fall. The deafness was so marked that she could not hear the loudest speech. She eventually recovered completely. ═══ The second case was in a woman, aged twenty-three, who had double parenchymatous keratitis at the age of seventeen, which lasted two years. During the course of the corneal inflammation she had attacks of headache, tinnitus, nausea, dizziness, and unsteady gait. When Knapp saw her, deafness was complete in one ear and almost complete in the other, with no bone-conduction on either side; tuning-fork heard before the right ear only. This condition remained entirely unchanged by treatment.

28. Politzer considers the subject of *alcohol in the treatment of aural polypi.* He thinks it indicated in cases where polypi can not be removed by operative methods; in multiple granulations of the external auditory canal and drum-head; in diffuse hypertrophy of the tympanic mucous membrane; and in place of operative treatment in nervous individuals.

32. Blake has constructed two *ear telephones* by means of two membranæ tympani, with the malleus and incus in position, and mounted on wooden frames. The telephone portions of the apparatus consisted of a disk of thin ferrotype plate, a magnet 8·5 ctm. long and 4 mm. in diameter, and a coil of fine copper wire, having a resistance of 44 ohms. The ferrotype disks were attached to the long processes of both malleus and incus by means of resin-wax. The telephones thus prepared were connected with an overhead wire, about six hundred feet long. The experiments were fully confirmatory of those of Bell on the use of plane membranes with attached armatures.

34. Upson's *aural douche* consists of a glass reservoir, of three pints' capacity, which is placed in a copper water-bath, provided with a thermometer in its top; and this in turn is inclosed in a sheet-iron jacket containing a spirit lamp, the tube of which is provided with an outer cylinder by which to regulate the size of the flame. The solution is forced from the reservoir by means of an atomizing bulb and tubing attached to a glass tube passing through a rubber stopper to the bottom of the vessel.

SEMI-ANNUAL REPORT ON ANATOMY AND PHYSIOLOGY.

No. I.

1. Zuckerkandl, E.—Bericht des wiener anatomischen Institutes über das Quinquennium 1874–'79. "Med. Jahrbücher," 1, 2, 1880.

2. Flower, W. H.—Abstract report of lectures on the comparative anatomy of man. "Brit. Med. Jour.," April 3, 10, 17, May 1, 8, 15, 1880.

3. ———.—The relationship of anatomy to the fine arts. [Editorial.] "Brit. Med. Jour.," March 20, 1880.

4. Vincent, E.—Revue critique de quelques travaux récentes sur le système osseux. "Rev. Mens. de Méd. et de Chir.," May, 1880.

5. Parker, W. K.—Abstract of lectures on the structure and functions of the vertebrate skeleton. "Brit. Med. Jour.," Feb. 21, 28, March 6, 13, 20, 1880.
6. Wherry.—Deficiency of bone at the vertex of the head. [Cambridge Med. Soc.] "Lancet," March 20, 1880.
7. Zuckerkandl, E.—Ueber die rudimentäre Bildung der Jochbeine und Jochbogen im Gesichtsskelete des Menschen. "Med. Jahrb.," 1, 2, 1880.
8. Raab, W.—Ueber das Zustandekommen und die Bedeutung der Assimilation des letzten Lendenwirbels an das Kreuzbein. "Med. Jahrb.," 1, 2, 1880.
9. Spitzka, E. C.—The architecture and mechanism of the brain. "Jour. of Nerv. and Ment. Dis.," April, 1880.
10. Clevenger, S. V.—The importance of the position of the fissure of Rolando, as an index to the intelligence of animals. "Jour. of Nerv. and Ment. Dis.," April, 1880.
11. Wilder, B. G.—The foramina of Monro: some questions of anatomical history. "Boston Med. and Surg. Jour.," Aug. 12, 1880.
12. Broca.—Anatomie du lobe olfactif. [Soc. Anat., Paris.] "Progr. Méd.," May 29, 1880.
13. Bigelow, H. R.—Anatomy and physiology of the chorda tympani nerve. "Brain," April, 1880.
14. Leuf, A. H. P.—Note on an abnormal distribution, hitherto unobserved, of the supra-orbital and infra-orbital nerves, explanatory of the recurrence of certain neuralgias. "Arch. of Med.," June, 1880.
15. Zuckerkandl, E.—Ueber das Gleiten des Ulnarnerven auf die volare Seite des Epicondylus internus während der Flexion im Ellbogengelenke. "Med. Jahrb.," 1, 2, 1880.
16. Holl, M.—Ueber die Lendennerven. "Med. Jahrb.," 1, 2, 1880.
17. Robinson, A. R.—Preliminary note on the mode of termination of the nerve entering into the formation of the "tactile corpuscle." "Arch. of Dermatol.," Jan., 1880.
18. Wendt, E. C.—The histology of the blood-vessels. "N. Y. Med. Jour.," July, 1880.
19. Raab, W.—Ein Beitrag zur Anatomie der Hohlhandarterien. "Med. Jahrb.," 1, 2, 1880.
20. Delore, A.—Note sur la disposition des vaisseaux placentaires. "Ann. de Gynécol.," March, 1880.
21. Shepherd, F. J.—Notes on abnormalities observed in the dissecting-room of McGill University. "Montreal Gen. Hosp. Rep.," I, 1880.
22. Anderson, R. J.—A new abnormality in connection with the vertebral artery. "Jour. of Anat. and Physiol.," Jan., 1880.
23. Forbes, W. S.—The diaphragm: a protector of the heart and cardiac vessels; its influence on the organs of circulation. "Am. Jour. of the Med. Sci.," July, 1880.
24. Lupò.—Riflessioni anatomiche intorno alla fascia transversale del Cooper. "Giorn. Internaz. delle Sci. Med.," N. S., I, 12.
25. Schwartz, E.—Recherches anatomiques sur la synoviale du genou et son cul-de-sac sous-tricipital. "Progr. Méd.," March 13, 1880.
26. Veit, J.—Zur normalen Anatomie der Portio vaginalis uteri. "Zeitschr. f. Geb. u. Gynäk.," v, 2, 1880.
27. Hebra, H.—Beitrag zur Anatomie des Nagels. "Med. Jahrb.," 1, 2, 1880.
28. Hermann.—Ueber die Errungenschaften der Physiologie in den letzten 40 Jahren. "Med.-chir. Centr.-Bl.," March 12, 26, 1880.

29. Pugliatti.—I progressi della fisiologia sperimentale e l'attuale indirizzo della medicina. "Giorn. Internaz. delle Sci. Med.," ii, 2.
30. Luciani, L.—Le prime quistioni fisiologiche. "Giorn. Internaz. delle Sci. Med." ii, 1.
31. Richet, C.—Vivisection, and its use in therapeutics and hygiene. "Lancet," March 20, 1880.
32. Kronecker.—Ueber die Ergebnisse, welche mit Hülfe kleinster verschluckbarer Maximal-Thermometer, sowie ähnlicher im Blutgefäss lebender Thiere circulirender Apparate in Bezug auf die Wärmevertheilung im Thierkörper gewonnen sind. [Physiolog. Gesellsch. zu Berlin.] "Deutsche med. Woch.," July 10, 1880.
33. Burman, J. W.—On the rate of cooling of the human body after death. "Edin. Med. Jour.," May, 1880.
34. Amidon, R. W.—The effect of willed muscular movements on the temperature of the head: new study of cerebral cortical localization. "Arch. of Med.," April, 1880.
35. François-Franck.—Critique des observations de thermométrie péricrânienne. [Soc. de Biol., Paris.] "Gaz. Hebd.," June 25, 1880.
36. François-Franck.—Sur la transmission à la surface externe de la peau du crâne des variations de température des couches superficielles du cerveau. [Soc. de Biol., Paris.] "Gaz. Méd. de Paris," July 3, 1880.
37. Amidon, R. W.—A contribution to the study of cerebral localization. "Jour. of Nerv. and Ment. Dis.," Jan., 1880.
38. Sobel, F.—Contribution à l'étude des localisations cérébrales; quatre observations recueillies. "Rev. Mens. de Méd. et de Chir.," July, 1880.
39. Franck, F., et Pitres.—Analyse par la méthode graphique des mouvements provoqués par les excitations du cerveau. [Acad. des Sci., Paris.] "Gaz. Méd. de Paris," May 22, 1880.
40. Couty.—Sur la forme et le siége des mouvements produits par l'excitation corticale du cerveau. [Acad. des Sci., Paris.] "Gaz. Hebd.," June 4, 1880.
41. Bartholow, R.—The transfer of sensations. "Jour. of Nerv. and Ment. Dis.," July, 1880.
42. Meryon, E.—On the mode of propagation of nervous impulses. "Lancet," Jan. 17, 1880.
43. Brown-Séquard.—Expériences montrant que l'anesthésie due à certaines lésions du centre cérébro-rachidien peut être remplacée par de l'hyperesthésie, sous l'influence d'une autre lésion de ce centre. [Acad. des Sci., Paris.] "Gaz. Hebd.,"April 9, 1880.
44. Ott, I.—Paralysis and anæsthesia—a preliminary note. "N. Y. Med. Jour.," May, 1880.
45. Smith, W. E.—The cause of sleep. "Boston Med. and Surg. Jour.," May 6, 1880.
46. Meyersohn, B.—Einiges über den Hypnotismus. "Deutsche med. Woch.," April 3, 1880.
47. Boerner, P.—Thierischer Magnetismus und Hypnotismus. "Deutsche med. Woch.," Feb. 21, 1880.
48. Berger. — Experimentelle Katalepsie (Hypnotismus). "Deutsche med. Woch.," March 6, 1880.
49. Bufalini.—Sulla destinazione fisiologica del corpo semilunare di Giannuzzi. "Giorn. Internaz. delle Sci. Med.," i, 12.
50. François-Franck, et Pitres, A.—Des dégénérations secondaires de la moelle épinière consécutives à l'ablation du gyrus sigmoïde chez le chien. "Progr. Méd.," Feb. 21, 1880.
51. Ughetti, G. B.—Delle alterazioni dei tessuti da mancata influenza nervosa. Ricerche sperimentali a speciale contribuzione della pato-

logia del tessuto muscolare striato. Torino: V. Bona, 1880. Pp. 32. With plate. (Reprint from "Archivio per le Scienze Mediche," iv, 9.

52. Gibson, G. A.—The sequence and duration of the cardiac movements. "Jour. of Anat. and Physiol.," Jan., 1880.
53. François-Franck.—Effets réflexes de la ligature d'un pneumogastrique sur le cœur après la section du pneumogastrique opposé. [Acad. des Sciences, Paris.] "Gaz. Hebd.," April 9, 1880.
54. Brown-Séquard.—Comparaison de la force et de la fréquence des battements du cœur qui a subi ou non l'influence d'arrêt du pneumogastrique. [Soc. de Biol., Paris.] "Gaz. Hebd.," June 25, 1880.
55. Brown-Séquard.—De l'accroissement de l'activité du cœur après qu'il a été soumis à une inhibition complète. [Soc. de Biol., Paris.] "Gaz. Méd. de Paris," July 3, 1880.
56. Rosolimos, S.—Sur une nouvelle théorie du choc précordial. [Soc. de Biol., Paris.] "Gaz. Méd. de Paris," May 22, 1880.
57. Keyt, A. D.—The presphygmic interval, or time required to start the arterial pulse after the beginning of the systole of the ventricle. "Boston Med. and Surg. Jour.," April 29, 1880.
58. François-Franck.—La contractilité des vaisseaux capillaires vrais; son rôle dans la circulation du sang. "Gaz. Hebd.," Jan. 30, Feb. 21, 1880.
59. Fenoglio.—Dei varj metodi e strumenti per valutare l'emoglobina nel sangue. "Lo Sperimentale," April, 1880.
60. François-Franck.—Sur l'innervation des vaisseaux des poumons et sur les effets produits dans la circulation intra-cardiaque et aortique par le resserrement de ces vaisseaux. [Soc. de Biol., Paris.] "Gaz. Méd. de Paris," July 10, 1880.
61. Flint, A., Jr.—Is the action of the medulla oblongata in normal respiration reflex? "Am. Jour. of the Med. Sci.," July, 1880.
62. Wagner, J.—Beiträge zur Kenntniss der respiratorischen Leistungen des Nervus vagus. "Med. Jahrb.," 1, 2, 1880.
63. François-Franck.—Sur la part qui revient aux influences respiratoires dans la déglutition, la rumination, et le vomissement. "Gaz. Hebd.," April 16, 1880.
64. Ewald.—Ueber das Verhalten der freien Salzsäure im Magensaft. [Gesellsch. f. Heilk. in Berlin.] "Deutsche med. Woch.," July 24, 1880.
65. Roberts, W.—On the digestive ferments and the preparation and use of artificially digested food. "Lancet," April 3, 10, 17, 24, May 1, 8, 15, 29, 1880.
66. MacMunn, C. A.—On urobilin and its production from bilirubin and biliverdin. "Dublin Jour. of Med. Sci.," June, 1880.
67. Laffont.—Recherches sur la vascularisation du foie et des viscères abdominaux au point de vue de la production du diabète par influence nerveuse. "Progr. Méd.," March 6, 1880.
68. Paladino.—Studii sulla fisiologia dell' ovaia, dell' emorragia, e del comportarsi della granulosa allo scoppio dei follicoli di Graaf. "Giorn. Internaz. delle Sci. Med.," ii, 3.
69. Paladino, G.—Studio sulla fisiologia dell' ovaja, struttura, genesi, e significazione del corpo luteo. "Giorn. Internaz. delle Sci. Med.," i, 10, 11.
70. Cadiat.—De la formation des ovules et des vésicules de De Graaf. [Acad. de Méd., Paris.] "Gaz. Méd. de Paris," April 3, 1880.
71. Puech, A.—L'expulsion de l'œuf, suit-elle ou précède-t-elle les règles? "Gaz. Obstét.," Feb. 20, 1880.

72. ———.—Production of sex at will. [Editorial.] "Boston Med. and Surg. Jour.," May 13, 1880.
73. Furman, W. B.—Effects of maternal impressions on the fœtus in utero. "St. Louis Med. and Surg. Jour.," May 5, 1880.
74. Ott, I.—The rapidity of perception of colored lights. "Jour. of Nerv. and Ment. Dis.," April, 1880.
75. Albertoni.—Sulla fisiologia del gusto. "Lo Sperimentale," April, 1880.

6. The patient was a man aged sixty-two, who suffered from *irregular deficiencies in the skull-cap*, the largest of which was on the left side of the sagittal suture, and measured two and one half inches in the long diameter. The edges were irregular, and the gap was crossed in the middle by a narrow bar of bone apparently belonging to the outer table. There was no scar on the skin or any sign of inflammatory thickening; the depth of the hollow was greatest on the side nearest to the suture. The inner table could not be felt to be perforated at any spot. Venous blood filled the gap when the man was made to stoop; the swelling was felt to bulge under the hand, and fluctuation could be made out under the bridge of bone that crossed the gap. The blood made to enter the hollow was presumably in communication with the veins of the diploë. The lesion might be considered an absorption of the outer table. Mr. Wherry pointed out that the deficiency in this case was different from the absorption due to pressure of the Pacchionian bodies. He quoted a case of the latter kind, reported by Meschedes in Virchow's "Archiv," vol. lvii, 1873, in which, as in the present case, the deficiency existed in the parietal bone, to the left of the sagittal suture, and in which it was found, after death, that the inner and part of the outer table had disappeared, and the cavity was occupied by a sack filled with blood-clot, and communicating with the longitudinal sinus by an irregular opening. This patient had suffered from melancholia and epileptic fits over a period of thirty-one years, and the case was regarded as one of varix of the longitudinal sinus. In the discussion, Dr. Humphrey said he had had his attention directed for a long time to these cases of deficiency in the outer table of the skull, but had formed no opinion of their origin. In his treatise on the human skeleton, he had referred to the specimens he had seen in museums; one had been placed in the Cambridge Museum by the late Professor Clark, in which there was a deficiency in the outer table of the parietal bone of each side, with no evidence of disease preceding. In the museum of St. Thomas's Hospital there was a similar specimen catalogued as "successful healing after trephining," and it so happened that the piece of bone exactly corresponding in the parietal of the other side was sawn out. He had recently observed, in the index to a German work, a reference to "senile atrophy of the parietal bone," which might be the same condition under another name.

13. Dr. Bigelow has been for many months engaged in a series of experiments on the *anatomy and physiology of the chorda tympani nerve*, and has reached the conclusion that it is not a branch of the facial proper, but the continuation of the intermediary nerve of Wrisberg, and that its physiology differs essentially from that generally claimed. He has already published the following conclusions: 1. The chorda tympani is distinct and integral throughout its entire length. 2. It is derived from the nerve of Wrisberg, and not the facial. 3. Its special sensory function is derived from the ganglion upon the nerve of Wrisberg, into the granular protoplasm of which the ultimate fibrils may be traced. 4. The lingual branch of the fifth nerve presides over general sensibility only. Isolation of the chorda tympani destroys the sense of taste in the anterior two thirds of the tongue, the fibers undergoing degeneration. 5. Section of the lingual

destroys sensibility, but only modifies the sense of taste; this modification being due exclusively to the branches from the chorda tympani. 6. Section of the facial, behind the origin of the chorda tympani, destroys the sense of taste *only after a lapse of time;* and this not because the facial at this point contains gustatory filaments, but because the nerve is cut off suddenly from its supply, and has received such a shock that it undergoes degeneration. If the chorda tympani be drawn out and divided at the point where we first notice its filaments of origin, the sense of taste will be almost entirely destroyed. If the nerve of Wrisberg be cut in the aqueduct behind the ganglion, the sense of taste is lost. From this it may be inferred that the intermediary nerve is continued in the chorda tympani, and that this latter is the carrier of the sense of taste from the cells in the intumescentia gangliformis. The differentiation of the intermediary nerve and the main trunk is attended with the utmost difficulty, and can be effected only by the use of reagents, teasing all the fibrils under a good lens mounted on a tripod. In this way the chorda tympani may be separated from the lingual and followed up, the terminal filaments expanding into the taste-cells of the beakers, the bulbous expansion at the end being identical with the transparent nuclei. In the same way, by using a power of 1,000 diameters, we may trace into the intumescentia gangliformis the nerve fibrils of the intermediary nerve in the processes of the ganglion at their junction with the cell, and these may be traced into the granular protoplasm.

[Dr. Spitzka, in the New York "Medical Record" of January 31st, adds an important confirmatory observation to those published by Dr. Bigelow, to the effect that the chorda tympani is the continuation of the nerve of Wrisberg. It is well known that this latter is entirely distinct from the facial at the origin from the medulla oblongata. In numerous transverse microscopic sections of human and animal peduncular tracts, he has found that the fibers of the nervus intermedius have no connection with the facial-nerve nuclei. Their central termination has been found to lie in lower altitudes; that is to say, while the facial nuclei are situated within the lower pons margin, the nucleus of the nerve of Wrisberg lies within the limits of the medulla in the level of the superior auditory nucleus. The gray origin of the nerve of Wrisberg is diffuse, and for that reason can not be called a nucleus in the strict sense of the term. On examining its relations more closely, we find that it does not correspond to the motor gray column of the medulla, but to an ideal continuation of the gelatinous column of the trigeminus region; in other words, it originates in the sensory gray column of the medulla. Dr. Spitzka takes exception to one statement of Dr. Bigelow's, in which he attributes the sensory function of the nerve of Wrisberg to the ganglia on the nerve, believing that peripheral ganglia are generally obscure in their function, and that the function of a cerebro-spinal nerve is determined by its *central* connections. Dr. Bigelow admits the general fact stated by Dr. Spitzka, but adds that no one has attempted a logical explanation of the functions of the peripheral ganglia, and that their existence upon sensory nerves seems to be ignored in the discussion of the characteristic nerve function. He thinks it may or may not be true that the functions of *all* cerebro-spinal nerves are determined by a *central* connection, and that there is no demonstrable proof for or against the theory. He doubts very much if the chorda tympani is made sensory solely through its central connection, but can make no absolute assertion, because experiments upon this ganglion are surrounded by almost insuperable difficulties. He has exposed it, and touched it with acetic acid; but a microscopic section showed that the chemical action had extended along the nerve fiber, and that it had lost its normal characteristics. He then tied the nerve with a small silk thread behind the ganglion, and irritated the ganglion with the electrode of a small Gaiffe battery; the sense of taste persisted for two hours and a half, so that there must have been reserve force at least within the ganglion. If it were possible either to extirpate the ganglion, or to destroy it without resultant injury to the nerve fiber, the question might be definitely settled; and to this end Dr. Bigelow has, he says, called to its fullest extent upon the little inventive genius he possesses, but so far without avail. He does not maintain that the intumescentia gangliformis in question is capable of originating the sensory function, although in some cases of paralysis it would seem to possess such a power, but thinks one of his experiments has demonstrated that it does act either as a storehouse or as a generator. The ganglion, too, serves to differentiate with exquisite precision between the effects of sapid substances, whose appreciation is governed by a central connection; the psychic phenomena of the cord contrasting strongly with the physical manifestation of the ganglion. For the experiments of M. Vulpian in this connection, see "The Lancet," June 15, 1878.]

21. Dr. Shepherd reports some interesting *anatomical abnormalities* from the dissecting-room of McGill University. The first is one of *congenital loss of substance in the parietal bone*, giving it the appearance of having been gouged out with some sharp instrument, and very apt to deceive a surgeon in examining a skull after injury. Two cases of the existence of an *epiphyal bone* (a bone connecting the styloid process with the hyoid bone) are reported, one of which was associated with a *paramastoid process* and connected with it by muscular fibers, as occurs in the horse. A *gastrocnemius muscle arising by one head*, the inner, in a female, is figured—an anomaly which is certainly very rare, the author believing this to be the only one on record. The presence of the *thyroidea ima artery*, so important in tracheotomy, is noted seven times, the vessel coming from the innominate in each instance. A *rectum beginning on the right side* is noted in five subjects, the sigmoid flexure being continued across from the middle of the left iliac fossa to the right sacro-iliac synchondrosis.

25. In his dissections of *the synovial membrane of the knee*, the writer examined 210 joints in children and 50 in adults. In the children 85 had an independent bursa which was multilocular or rudimentary, and 35 had a well-formed independent sack. In 145 this bursa communicated with the knee-joint—by a large opening in 125, and a small one in 20. Of the 50 in adults, 39 communicated and 11 were independent. The communication exists twice as frequently with men as with women. The two knees are generally symmetrical. The age at which the bursa develops is variable.

32. Dr. Burman gives some very interesting and valuable experiments in determining *the rate of cooling of the human body after death*—a question of great medico-legal importance, as determining the time during which life has been extinct. The observations were made with a long bent thermometer in the left axilla and lying over the chest, so that the markings could be read without removing it; the body being in bed, covered with the usual night-shirt and ordinary bedding. In each case the body was in a room 6 × 9 × 12 feet, and the temperature of the room was observed and noted from time to time. Assuming it, then, to be correct that, as a rule, the temperature of the body found dead may be considered to have been about normal at the time of death, the conclusion drawn from the author's observations is, that, given a body found dead in bed in a room (with a temperature ranging from 50° to 70° F.), with ordinary bedding, we may fairly estimate the time of death by taking the temperature of the axillæ—the difference between which and the average normal temperature of 98·4° divided by 1·6 would, with tolerable accuracy, give us the number of hours that had probably elapsed since death. Or, in another way, a solution of the problem might be reached by finding the multiplier of 1·6, which would give the total number of degrees cooled, which multiplier would represent the number of hours that had probably elapsed since death. Thus, for instance, supposing a body to be found dead under the circumstances above described, and the temperature of the axilla being ascertained to be 80° F., then 98·4° (estimated temperature at death) — 80 = 18·4° (degrees cooled); which, divided by 1·6, would give us 11·5 as representing the number of hours that had probably elapsed since death. For all ordinary purposes, a sufficiently accurate conclusion may be arrived at by eliminating fifths and decimals, and calculating on the basis of 98° F. as the average normal temperature, and of 1·5° as the average rate of cooling in an hour. A further consideration of the details of the cases, as recorded, tends to show that the body cools somewhat more rapidly for the first few hours after death than it does later on; and especially would this seem to be the case when the temperature is extraordinarily high at the time of death. There is also in some cases a *rise of temperature* after death, a phenomenon which should also be studied.

37. Dr. Amidon's experiments in *cerebral localization* are based on the following propositions. 1. Marked local variations in the temperature of the cephalic contents can be demonstrated by surface thermometers. 2. Cerebral cortical localization is now so far advanced as to warrant the assertion that the psycho-motor centers for one half the body occupy a certain area in the cerebral cortex of the opposite hemisphere. 3. Functional activity of an organ implies increased blood supply and tissue change, and consequent elevation of the temperature of that organ. 4. Willed contraction of muscles presupposes an increased activity of the volitional motor center of those muscles in the cerebral cortex. From this it was natural to make the deduction that voluntary activity in a peripheral part would cause a rise of temperature in the psycho-motor center for that part, which might be indicated by external cerebral thermometers. Seguin's self-registering surface thermometers were used, numbers of which were applied to the surface to be tested by passing them through holes in rubber straps secured to the head by buckles. The desirable points in the subject experimented on are, a well-shaped head, thin hair, well-developed and trained muscles, power of facial expression, especially of unilateral facial movements and the ability to contract individual muscles, and moderate intelligence. A man is preferable to a woman, and a European to an African. The mode of performing and recording experiments and the liabilities to error are all fully described, and the following results are given. The part of the brain underlying the trapezius area is thus seen to be the anterior part of the first frontal convolution. Farther back on the same comes the deltoid, and farther still the biceps area, while that of the triceps probably overlaps to a slight degree the fissure of Rolando. The area for the scaleni, etc., will fall on the second frontal convolution, in front of its middle; that for the deep extensors of the neck, on the second frontal convolution, near its middle. The pectoralis area will fall on the middle of the second frontal convolution, slightly overlapping the superior frontal sulcus. The area for the latissimus dorsi occupies a similar position farther back. The point of junction of the superior and ascending frontal is occupied by the hand and finger flexors, while lower on the ascending frontal lies the area for the elevators of the angle of the mouth, and lower still, that for the orbicularis oris, in front of and above which is the area for the tongue and the hyoids, which lies on the third frontal convolution. At the base of the ascending parietal convolution, but reaching a slight distance across the fissure of Rolando, lies the platysma area;

higher, the area for the orbicularis palpebrarum, and higher still, lying partly on the ascending parietal, and partly on the ascending frontal convolutions, is the area for the extensors of the hand and fingers. The anterior part of the superior parietal lobule holds the anterior tibial area, behind which lies that of the calf. On the posterior part of the superior parietal lobule, but falling chiefly on the first and second occipital gyri, is found the area for the quadriceps extensor femoris, while on the third occipital gyrus and the posterior part of the inferior middle temporal lobule will fall the area for the abdominal muscles. On the posterior parts of the angular gyrus and middle temporal lobule will fall the psoas and iliacus area. The rather indefinite area marked out for the erector spinæ overlies about equally the posterior part of the upper and of the middle temporal lobules, while higher up, over the contiguous portions of the angular and supra-marginal gyri and the superior temporal lobule, is the area for the flexors of the leg on the thigh. On the upper part of the supra-marginal gyrus will fall the area set apart for ocular movements. This transference of the motor areas from the scalp to the brain leaves but little of the cerebral convexity uncovered, viz., the anterior half of the temporo-sphenoidal lobe and the extreme anterior frontal region. These areas are held to be the outward representation of psycho-motor centers in the cerebral cortex.

51. This is a minute and exhaustive investigation into the *effects of the removal of a portion of the sciatic nerve in rabbits*, in seven experiments. The changes in weight of the parts supplied, after different intervals, are shown by contrast with the sound side, in tabular form. A chart of the variations of temperature of the sound and of the paralyzed limb is given, and the changes in the striated muscular tissue, as shown by the microscope, are beautifully depicted.

65. Dr. Roberts, in his Lumleian Lectures on *the digestive ferments, and the preparation and use of artificially digested food*, has made perhaps the most important contribution to the literature of this subject of recent years. We trust that the lectures will be published in book form. At present we can give only the merest outline of the ground he has so ably and thoroughly covered.

He recognizes vegetable as well as animal digestion, and a digestion which takes place exteriorly, at the surface of the organism, as well as an interstitial digestion in the interior of the organs and tissues. These two types of digestion are essentially alike, as regards both the agents and the processes by which they are carried out; and, although the one is more developed in the animal kingdom and the other in the vegetable, both types are represented in the two kingdoms, and bear witness to the fundamental unity of the nutritive operations in plants and animals.

General Characters and Properties of Digestive Ferments.—The number of distinct ferments that take part in the digestion of the food used by man is not exactly known, but there are at least seven or eight. All of them that are known belong to the type of soluble or unorganized ferments. They are sharply distinguished from the insoluble or organized ferments, of which yeast is the type, in not having the power of self-nutrition and self-multiplication. They are all the direct products of living cells, and may be regarded as detached repositories of cell force. Their mode of action bears no relation to that of ordinary chemical affinity, but has a distinctively physiological character. Their chemical and physical characters appear to be tolerably uniform, but no one of them has yet been obtained in a state of absolute purity. Each has its special correlative alimentary principle, or group of principles, on which alone it is able to act. The changes impressed on alimentary principles by the digestive ferments are not, chemically speaking, of a profound character; and they affect much more the physical state of these principles than their chemical composition. It does not appear to be absolutely true that all food requires digestion before it can be absorbed. Fat is largely taken up by the lacteals in its unaltered state, except in so far that it is finely divided. Grape-sugar is not known to suffer any digestive operation, but is absorbed unchanged. The changes produced in food by digestion are, in their ultimate results, very similar to, if not identical with, those produced by protracted cooking.

In the *preparation of artificial digestive juices*, the author has sought to obtain a solution of the digestive ferments which could be administered as a medicine by the mouth, or which could be employed in the preparation of artificially digested food; and also for a preservative which either had little taste and smell, or was volatile and could be removed by vaporization. After a good many trials, he has adopted the three following solutions. 1. Boracic solution (a solution containing three or four per cent. of a mixture of two parts of boracic acid and one part of borax). 2. Dilute spirit (water with twelve or fifteen per cent. of rectified spirit). 3. Chloroform water (chloroform and water in the proportion of one to two hundred).

Alimentary substances are naturally divided into carbohydrates, proteids, and fats, and the digestion of the three groups is considered in this order. The *digestion of starch* is dealt with at length. It is accomplished by the saliva and the pancreatic juice, both of which are rich in diastase. The speed of liquefaction and saccharification depends primarily on the proportion of this diastase. The respective shares of saliva and pancreatic juice in the digestion of starch are probably variable and not quite identical. The author's experiments have led him to the conclusion that the extent to which saccharification goes on in the stomach depends upon the degree of acidity of the contents of the organ, which varies within very wide limits. It has been noted as curious that the saliva of man possesses more diastatic power than that of almost any other animal. Among the herbivora, which are such large consumers of starch, the saliva has comparatively little diastatic power; and in some, as the horse, it is almost wanting. This is perhaps due to the fact that man alone has learned to cook his starchy food, and that the diastatic power of his saliva has become developed with the opportunity for its exercise. Such power would be thrown away in the horse, because he eats his food raw, and saliva has no action on uncooked starch. *When can starch be said to be fully digested?* Is maltose the only product absorbed, or are not the dextrines, especially the achroö-dextrines, also absorbed? There is no warrant in the present state of our knowledge for the opinion that sugar is the only absorbable product of starch digestion. As to the absolute energy of diastase, the notion that it is not consumed in action seems, on *a priori* grounds, quite untenable; such a notion contravenes a general principle in physics, that energy is expended and finally exhausted in performing work. It is easy to show experimentally that diastase is no exception to this rule. The diastatic ferment does not exist in the saliva and pancreatic juice of young suckling animals, except in minute proportions. Its quantity increases when the teeth are cut. In the human infant it does not exist in sufficient abundance to digest starchy matters effectively until about the sixth or seventh month. Until this period, therefore, farinaceous food should not be given to infants.

Digestion of Cane-Sugar—Inversive Ferment.—Bernard found that cane-sugar stored up in beet-root and sugar-cane was changed by ferment action into invert-sugar before it was permitted to circulate in the sap. He found also that an analogous transformation was requisite before cane-sugar could be assimilated by animals. He states that when cane-sugar is injected into the blood it circulates therein as an inert body, and is in no degree used as nutriment by the tissues, but is eventually entirely removed by the urine. But, since it is nevertheless an important article of food, he sought for an inversive ferment in the alimentary tract, and finally found it in the small intestine. It does not exist in the large intestine.

Digestion of Proteids.—Proteids are attacked by digestive ferments at two points, by pepsin in the stomach, and by trypsin in the small intestine. Between these two there is a complete break in the duodenum, owing to the abrupt change from acidity to alkalinity at this point. Richet's experiments have proved that the acid constituents of the gastric juice are in great measure organic, set free from the articles of food undergoing digestion. These experiments led to the reëxamination of a point of some importance, namely, as to whether the salivary, and more especially the pancreatic, ferments were or were not destroyed by the acid contents of the stomach. The matter has a practical interest. If the gastric acid destroys these ferments, it is evidently useless to give pancreatic preparations by the mouth during digestion, because they would be rendered inert by the acid contents of the stomach. On the other hand, if they are not so destroyed, but merely lie dormant and recover their activity in the alkaline medium of the small intestine, then we can administer pancreatic preparations during digestion with every prospect of their passing uninjured through the pylorus and proving useful in assisting digestion in the small intestine. As this question has a direct bearing on the administration of pancreatic preparations, and indirectly on the administration of malt-diastase and malt-extract, the author repeated many previous experiments, and, after testing the question in other ways, was unable to accept the conclusions of Defresne and others, who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion, and who recommend the administration of pancreatic preparations by the mouth during the period of chymification.

Digestive Proteolysis.—The changes undergone by albuminoid substances in digestion are still very imperfectly understood; it is understood, however, that the chief final product of the transformation is peptone, and that between any native proteid and peptone there are intermediate grades and by-products, which have hitherto proved difficult to define and isolate. Peptone itself has been fairly isolated and its characteristics have been defined.

Comparison of the Action of Pepsin and Trypsin.—The action of these two ferments, although similar in the main results, is certainly not identical. There is a greater production of leucin and tyrosin in tryptic than in peptic digestion. Moreover, the action of the two ferments on different proteids appears to vary both in character and in energy.

The Milk-curdling Ferment.—It has been thought, until lately, that to coagulate milk was the peculiar property of pepsin, but this is no longer tenable. The pancreas also contains an agent capable of curdling milk; and that this agent, both in the stomach and in the pancreas, is a true ferment, and not an inorganic chemical agent, seems to be proved by the fact that boiling it, or even heating it to 160° F., instantly destroys its power. The real function of the curdling ferment is not the coagulation of casein. Man is the only adult creature for whom milk is a part of the normal diet, nor can its universal presence in the mammalian digestive organs be regarded as a vestigeal phenomenon—a "memory" of the suckling phase of existence—for the same curdling property is found in the stomach and pancreas of the fowl, which never fed on milk at any period of its life. Moreover, it may be doubted whether this ferment is the actual agent in curdling milk, or whether the acid of the stomach is not beforehand in the process.

The second part of the subject, *the preparation and use of artificially digested food*, will be found to contain a great deal that is of value to the practitioner. The suggestion to administer artificially digested food to invalids appears at first rather a startling proposal, but the practice of cooking is really as great a departure from the ways of Nature as artificial digestion would be. The articles of food which we still use in the uncooked state are few, and it is not difficult in each case to point out the reasons for the omission. Fruits owe their value chiefly to their sugar, and sugar is not changed by cooking. Salads may be regarded more as a relish for other foods than as a substantial source of nourishment. Milk is used both cooked and uncooked, indifferently, and experiment justifies this use, for its digestion by pancreatic extract is not appreciably hastened by its previous boiling. Our practice in regard to the oyster is quite exceptional, and furnishes a striking example of the general correctness of the popular judgment on dietetic questions. The fawn-colored mass which constitutes the dainty of the oyster is its liver, and this is little else than a heap of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the hepatic diastase. The mere crushing of the dainty between the teeth brings these two bodies into contact, and the glycogen is at once digested by its own diastase without other help. The oyster, uncooked, is in fact self-digestive, but a cooked oyster has to be digested like any other food, by the powers of the eater. With regard to the staple articles of our food, and especially in regard to the farinaceous articles, cooking is actually indispensable, and the changes produced by cooking form an integral part of digestion. It must also be borne in mind that the digestive process carried on in the alimentary canal is, strictly speaking, executed on a doubling of the exterior surface, and not in the true interior of the body. Taking all these considerations into account, it would appear not unnatural that we should try to help our invalids by administering their food in an already digested or partially digested state. We should thereby only be adding one more to the numberless artificial contrivances with which our civilized life is surrounded.

Preparation of Artificially Digested Food.—It is evident that, if artificially digested food is to be employed on a large scale, and by all classes, means must be found to bring the preparation of it within the range of culinary operations and the apparatus of the kitchen and sick-room. The difficulty hitherto encountered in the production of an artificially digested food suitable for invalids is mainly owing to the use of the gastric method. The author's efforts have been chiefly directed to the pancreatic method. The pancreas excels the stomach from the fact that it has the power of digesting the two great alimentary principles, starch and proteids; and an extract of the gland is possessed of similar qualities. Any extract of pancreas may be used, but the best are those prepared with dilute spirit or chloroform-water. With this preparation, it is possible to digest milk with little alteration of its taste or properties, and the process is usually completed in two and a half or three hours. Gruel may be prepared from any of the farinaceous articles in common use—wheaten flour, oatmeal, arrowroot, sago, pearl barley, pea or lentil flour. The author has had most experience with peptonized milk-gruel, and has obtained most satisfactory results from it. It may be regarded as an artificially digested bread-and-milk, and as forming by itself a complete and highly nutritious food for weak digestions. He has also succeeded in preparing peptonized soups, jellies, and blanc-manges, containing a large amount of digested starch and digested proteids, possessing excellent flavor, and which the most delicate palate could not accuse of having been tampered with. Peptonized beef-tea, when seasoned with salt, is scarcely distinguishable from ordinary beef-tea.

Nutritive Value of Peptonized Food.—Is artificially digested or peptonized milk alone sufficient to maintain nutrition? and is it as efficient in this respect as natural milk? The answer which the author's experiments have led him to is, that, except in extreme cases, when the digestive power is wholly lost or in complete abeyance, it is more advantageous to use a food which has been subjected to partial artificial digestion than a food in which the process has been carried out to completion. If the patient possesses any digestive power at all, it is better that that power should be kept in exercise than that it should be permitted to deteriorate still further from total disuse. Dr. Roberts gives the result of his clinical experience with these foods in uræmic vomiting, gastric catarrh, the crises of cardiac disease, pernicious anæmia, gastric ulcer, and pyloric and intestinal obstruction; also with the use of pancreatic extract added to food shortly before it is eaten, and as an addition to nutritive enemata.

◆

Miscellany.

Army Intelligence.—*Official List of Changes of Stations and Duties of Officers of the Medical Department of the United States Army from Aug. 14, 1880, to Sept. 13, 1880.*—Moore, Jno., Major and Surgeon. Having relinquished the unexpired portion of his leave of absence, will report in person to the Surgeon General in this city. S. O. 192, A. G. O., Sept. 9, 1880. ==== McKee, J. C., Major and Surgeon. Granted leave of absence for one year on Surgeon's certificate of disability. S. O. 177, A. G. O., Aug. 19, 1880. ==== White, C. B., Major and Surgeon. His sick-leave of absence further extended three months on Surgeon's certificate of disability. S. O. 181, A. G. O., Aug. 25, 1880. ==== Happersett, J. C. G., Major and Surgeon. At the expiration of his present leave of absence, to report to the Commanding Officer, Fort Ringold, Texas, for duty as Post Surgeon. S. O. 161, Department of Texas, Aug. 10, 1880. ==== Huntington, D. L., Major and Surgeon. To accompany the President and General of the Army to California, Oregon, Washington Territory, Arizona, New Mexico, Colorado, and Kansas, and then return to his station in this city. S. O. 182, A. G. O., Aug. 28, 1880. ==== King, Wm. H., Captain and Assistant Surgeon. His sick-leave, granted him July 21, 1880, from Headquarters, Department of Dakota, extended three months on Surgeon's certificate of disability. S. O. 183, A. G. O., Aug. 30, 1880. ==== Cronkhite, H. M., Captain and Assistant Surgeon. Having reported in person at these Headquarters, is assigned to temporary duty at Fort Sidney, Nebraska. S. O. 83, Department of the Platte, Sept. 7, 1880. ==== O'Reilly, R. M., Captain and Assistant Surgeon. His leave of absence on account of sickness extended four months on Surgeon's certificate of disability. Relieved from duty in Department of the South, and, at expiration of his present leave of absence, to report by letter to the Surgeon General. S. O. 174, A. G. O., Aug. 16, 1880. ==== Harvey, P.

F., Captain and Assistant Surgeon. At expiration of his present leave of absence, to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 182, C. S., A. G. O. ===== Ainsworth, F. C., Captain and Assistant Surgeon. When relieved, to comply with S. O. 89, C. S., A. G. O., in his case. S. O. 100, Department of Arizona, Aug. 10, 1880. ===== Havard, V., Captain and Assistant Surgeon. To proceed to Fort Clark, Texas, and report to the Commanding Officer, First Infantry, for duty with his command. S. O. 158, Department of Texas, Aug. 8, 1880. ===== Moseley, E. B., Captain and Assistant Surgeon. The leave of absence granted him from Headquarters, Department of the Platte, Aug. 17, 1880, is extended two months. S. O. 187, A. G. O., Sept. 3, 1880. ===== Skinner, J. O., Captain and Assistant Surgeon. Assigned to duty at Whipple Barracks, Arizona Territory, relieving Assistant Surgeon Ainsworth. S. O. 100, C. S., Department of Arizona. ===== Worthington, J. C., Captain and Assistant Surgeon. Relieved from duty in Department of Arizona, to proceed to Baltimore, Maryland, and on arrival report by letter to the Surgeon General. S. O. 182, C. S., A. G. O. ===== Comegys, E. T., Captain and Assistant Surgeon. Granted leave of absence for four months. S. O. 181, C. S., A. G. O. ===== Assistant Surgeon Walter Reed to proceed without delay to Creedmoor, Long Island, for temporary duty with the United States Troops at that point. S. O. 156, Department of the East, Sept. 6, 1880. ===== Burton, H. G., First Lieutenant and Assistant Surgeon. Relieved from duty in Department of Arizona, to proceed to Boston, Massachusetts, and report arrival there by letter to the Surgeon General. S. O. 182, C. S., A. G. O. ===== Ebert, R. G., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Walla Walla, Washington Territory. S. O. 140, Department of Columbia, Aug. 16, 1880. ===== By par. 2, S. O. 190, A. G. O., Sept. 7, 1880, the following changes are made, to take effect Oct. 1, 1880: The following-named officers are relieved from duty in the Department of the East, and will report in person to the Commanding Generals of the Departments set opposite their respective names for assignment to duty: Assistant Surgeon D. G. Caldwell, Department of the Platte; Assistant Surgeon J. H. Patzki, Department of the South; Assistant Surgeon B. F. Pope, Department of Dakota; Assistant Surgeon W. J. Wilson, Department of Dakota. Assistant Surgeon Frank Meacham is relieved from duty in the Department of Texas, will proceed to Boston, Massachusetts, and upon arrival report by letter to the Surgeon General. Assistant Surgeon R. H. White will report in person to the Commanding General, Department of West Point, for assignment to duty at the United States Military Academy, relieving Assistant Surgeon Henry Lippincott, who, when relieved, will proceed to New York city, and upon arrival report by letter to the Surgeon General. Assistant Surgeons M. K. Taylor and J. H. T. King are relieved from duty in Department of Texas, will proceed to New York city, and upon arrival report by letter to the Surgeon General. Assistant Surgeon W. Matthews will report in person to the Commanding General, Department of the Missouri, for assignment to duty. Assistant Surgeon T. A. Cunningham is relieved from duty in Department of Dakota, will proceed to New York city, and upon arrival report by letter to the Surgeon General.

LIBRARY
HARVARD UNIVERSITY
DENTAL SCHOOL

THE
NEW YORK
MEDICAL JOURNAL.

NOVEMBER, 1880.

Original Communications.

THE THERAPEUTICAL USE OF THE MAGNET.*

By WILLIAM A. HAMMOND, M. D.,
SURGEON-GENERAL, U. S. ARMY (RETIRED); PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK, ETC.

That a magnet is capable of exercising a strong physiological influence over animals and even plants is a fact which, though overlooked or disregarded by physicians generally, experiment has definitely established. The reason for this neglect is doubtless to be found in the circumstance that the promulgators of the science of magnetism in its relations to life have generally mingled so much chaff with the grain of wheat that the latter has been lost sight of in the great superfluity of the former.

Several years ago the subject was investigated by the Baron von Reichenbach, a man who not only was endowed with profound learning, but was held in great respect by Liebig and other eminent scientists. He performed a large number of experiments upon neurotic men and women, and, though much that he deduced from his researches must be regarded as not proven, this can not be correctly alleged of all his conclusions. For instance, that the following observation is true, any one can easily determine for himself. I have repeatedly satisfied myself of its correctness.

---

* Read before the New York Neurological Society, October 5, 1880.

"If a strong magnet, capable of supporting about ten pounds, be drawn downward over the bodies of fifteen or twenty persons, without actually touching them, some among them will always be found to be excited by it in a peculiar manner. The number of persons who are sensitive in this way is greater than is generally imagined. . . . The kind of impression produced on these excitable people, who otherwise may be regarded as in perfect health, is scarcely describable; it is rather disagreeable than pleasant, and combined with a slight sensation of cold or warmth, resembling a cool or gently warm breath of air, which the patients imagine to blow softly upon them. Sometimes they feel sensations of drawing, pricking, or creeping; some complain of sudden attacks of headache; not only women but men, in the very prime of life, are found distinctly susceptible to this influence; in children, it it is sometimes very active." *

It is undoubtedly a fact that experiments such as these are liable to lead to very deceptive results. All persons are more or less under the operation of the "principle of suggestion"; that is, of seeing and feeling as they are expected or told to see and feel. But, even when performed with every precaution taken to guard against the operation of this factor, phenomena not differing essentially from those observed by Reichenbach are produced. As an example of this, I adduce the following experiment, performed only a few days ago:

A gentleman, thirty years of age, and by no means of an impressionable nature, by request bared his right arm up to the shoulder, and laid it at full length on a table. I then bound a handkerchief tightly over his eyes, and desired him to tell me what sensations he felt in the arm. Having thus induced him to concentrate his attention on that part of his body, I held a strong horsehoe magnet immediately over the nape of his neck and at about the distance of an inch from

---

* "Physico-Physiological Researches on the Dynamics of Magnetism," etc. English Translation by Dr. JOHN ASHBURNER, London, 1851, p. 3.

the skin. In thirty-two seconds, by the watch, he said: "I feel nothing at all in my arm, but I feel a queer, numb sensation at the back of my neck." In about ten seconds more he exclaimed: "It feels now as if you were focusing a sun-glass on the back of my neck." I removed the magnet, and asked him if he felt nothing in his arm. "No," he replied, "I think not."

While he was talking, I hastily brought the magnet over the top of his head, at the same time stroking his arm with a paper-knife. "I feel you rubbing my arm with something," he said, "but the numbness has gone out of my neck, and is just on the crown of my head."

I then took the magnet away, and then moved it over the arm, from the shoulder to the fingers, at the distance of an inch or so from the surface. After two or three passes of the kind, he said: "Now I do feel something in my arm; it is a sensation as if you were sticking pins in it, though it does not hurt." After a few seconds: "Now it feels like the sun-glass all along the arm."

Other modifications of the experiment were made, and always with the like result. It was evident that the magnet produced sensations in parts of the body where its proximity was not suspected.

Reichenbach supposed that such phenomena, and others which he described, were due to a force which he was the first to recognize, and which he claimed was present in the body. He called this the *odic* force—*od*, or *odyle*. When it was present in great quantity, the subjects were regarded as sensitive, and were capable of exhibiting still more decided effects from the action of magnets than those already mentioned. These *sensitives* were almost invariably persons, mostly women, of strong neurotic temperaments. As he says, he preferred those who were frequently troubled with periodical headaches—especially megrim, who complained of temporary oppression of the stomach, or who slept badly without apparent cause, talked during sleep, were restless at night during the influence of the full moon, who were readily disordered in churches or theatres, or were very sensitive to strong smells. When such persons were brought into a dark room, in which were several magnets, they were able after a few minutes to determine the relative positions of these objects by the luminous rays which were given off from their poles.

As illustrative both of the effects of magnets and of the necessity of guarding against unintentional deception on the part of the subject, I cite the following extracts from a letter written by M. Volpicelli,"* of Rome, to M. Chevreul, of Paris:

"A physician," says the writer, "possessing an excellent reputation, asserts that, if a magnet be brought into contact with a nervous subject, the magnetism produces many disquieting effects, and notably deranges the health. For my part, I do not think these disturbances are in any way due to the magnetic influence, whose real existence, however, I do not contest; but I attribute them to the influence of the person's imagination. I was invited by the learned medical professor to experiment upon a nervous subject at the Hôpital du Saint Esprit, at Rome. I accepted the courteous offer, but, instead of a magnet, I brought a piece of iron which was not in the least magnetized [?]. The patient had no sooner seen this iron than he was seized with violent convulsions; his imagination was so excited that we could observe the greatest intensity of nervous disturbance.

"I made a second experiment: a magnet was placed in the hand of a person likewise affected with a nervous malady; at the end of a few seconds he became so violently excited that I was obliged to remove it. I was impressed with the conviction that the nervous disturbance was produced by the mere sight of the loadstone, and not by any magnetic action, and several days afterward I was able to convince myself by means of the following process. The same person was called upon to preside at a scientific reunion. I took powerful magnets and placed them in his chair, in his table drawer, and even beneath his feet, without his having the slightest suspicion of any of my preparations; during the *séance*, which continued more than two hours, he had no nervous disturbance whatever, and, at the conclusion of the meeting, he declared, on my asking him, that he felt perfectly well. On being told that he had been surrounded by powerful magnets, he manifested both surprise and fear, as though he were not quite sure of being in perfect health."

---

* "Comptes Rendus," August 31, 1874.

But the most philosophical, and at the same time practical, essay on the action of magnetism on living beings is that of Dr. John Vansant.* His experiments were performed both on plants, which can not be suspected of being influenced by the "principle of suggestion," on insects and other of the lower animals, likewise unamenable, and upon human beings under circumstances calculated to avoid all suspicion of the action of any other factor than that of magnetism.

Dr. Vansant used small steel magnets, capable of sustaining about an ounce of iron, the ends of which were sharply pointed, and which had, for convenience of manipulation, a wooden handle in the middle. As Dr. Vansant's paper is not generally accessible, in view of the importance of the subject I quote the following description from his paper:

"My attention was first particularly directed to the subject of this communication in the winter of 1866, when I observed that a small magnetized steel rod, the *ends of which were finely pointed*, if brought carefully in contact with an exquisitely sensitive blister that had been accidentally produced on one of my fingers by pinching, gave rise, when the southward pole was applied, to a momentary sharp sensation, and seemed to cause the blister to be more painful after the magnet was removed. When the northward pole was used in the same way, no sensation could be felt at the moment of contact, and after removal the original pain remarkably subsided. Struck by this phenomenon, and yet almost doubting my own sensations, I proceeded to inquire if it were possible to recognize a difference between the two ends of a magnet by means of some organ peculiarly sensitive in its normal condition. On trial, I found that the conjunctival membrane of the eye would indicate by the feeling which pole it was touched with.

---

* "On the Physiological Action of Magnetism." By JOHN VANSANT, formerly Passed Assistant Surgeon, U. S. Navy, and late Surgeon and Brevet-Lieutenant-Colonel, U. S. Army: "Journal of Psychological Medicine," New York, April, 1870, p. 264.

I could lay, with care, the sharpened northward end of the magnetic rod on that membrane without pain or winking, but, the instant the southward pole was applied, no matter with how much delicacy, there was a sharp sensation and an involuntary slight closing of the eyelid. The effect was faint, but plain. This experiment was repeated on the eye of another person the same day, with similar results. After this, I made numerous experiments with magnets of different forms and powers (though not at any time with very large ones) applied to various parts of the body, and thought I observed a definite set of symptoms after every application in the same manner to a given part, provided sufficient time had elapsed between the applications for the organ to resume its ordinary state. Finally I became convinced of the genuineness of the phenomena—that they were not to be attributed to the imagination, and that they were as regular in their occurrence and quite as persistent as those following the administration of any medicinal substance."

Dr. Vansant's experiments were mostly of a physiological character. He, however, records three cases in which the magnet was used as a therapeutical measure, and with instant effect. Thus: "Mr. I. R., a gentleman of rather delicate organization, had neuralgia in the upper part of one side of his face. I applied the northward (—) pole of a small bar magnet, not quite capable of lifting half an ounce with one pole, for a few seconds over the painful place. In about ten minutes he said the pain was increased and more localized. I then applied the southward pole in the same way, and in a few minutes he said the pain had nearly ceased. This gentleman *expected* to be relieved by the *first* application.

"Mr. M., a strong, unimaginative man, had facial neuralgia of malarial origin. I applied the — pole of the same small magnet last described over the seat of pain for about one minute. In five minutes he complained of the pain being worse. I then made an application of the + pole, and in less than a minute the pain almost subsided. After about an hour there was a recurrence of the pain for a short time, but much lessened in intensity. This person, also, was led to *expect* relief by the first plan of application.

"Mrs. S., a lady of remarkable sensitiveness, but great self-control, was suffering from excruciating neuralgia of the nerves passing out of the left side of the pelvis. The day before, I had injected subcutaneously, near the painful place, one fourth of a grain of sulphate of morphia, with the effect to produce very great depression of the vital powers, but not to relieve the pain, which continued to be felt during the semi-consciousness that followed. On this occasion, without any knowledge on the part of the lady of what I was doing, I passed slowly, for about ten seconds, over the upper third of the thigh, the — pole of a strongly magnetized steel rod, four inches long by one third of an inch in diameter. The effect was surprising and alarming. The pain shifted its position, became more diffused and higher up, but was not relieved. A state of stupor intervened, her respiration was oppressed, a death-like pallor overspread her countenance, her features became contracted, her eyes sunken and half closed, the heart acted feebly, and the surface of the body was cool and covered by clammy perspiration. The depressing effect much resembled the action of morphia on the previous day, but was even greater. All these symptoms were manifested within a few minutes. After waiting about fifteen minutes, I applied the other pole, the + one, for the same length of time, to a spot a little below the hip-joint, and in a short time new symptoms were manifested. The pain was apparently increased and more localized, the extremities cool, but the perspiration was checked, the breathing was deeper, the eyes closed naturally, and all the signs of depression began to vanish."

These extracts from Dr. Vansant's very interesting paper are sufficient to show the results of his researches. I come, in the next place, to detail my own observations.

Unlike Dr. Vansant, who used bar magnets, I have found the horseshoe form, such as that now exhibited, more available. It is better to have them all of one size, for then they can be bound together and the power greatly increased. The poles can be separated by so inclining the magnet as to bring one pole nearer to the surface than the other. In many cases, however, it is advisable to use both poles, a measure impracticable with bar magnets. Moreover, the bar magnet soon loses its magnetism, whereas the horseshoe magnet, if the keeper be retained in its proper position, will suffer no deterioration in years of constant use. When it is advisable to act with great effect upon a very limited portion of the body, needles may be attached to one or both poles, or placed between a pair of magnets. When two or more magnets are united into a compound one, care must be taken that all the north and all the south poles correspond; otherwise the power will be greatly reduced.

I have, during the past two years, employed magnets to a considerable extent in my practice, mainly in the treatment of neuralgia, but it is only for a short time that I have used them in chorea and paralysis. It is these last classes of cases that I propose to consider in the present paper, so far as the therapeutical influence of the magnet is concerned.

CHOREA.

Case I.—A. C., aged ten, became affected with chorea, as nearly as could be ascertained, about the 5th of July of the present year. She came under my observation August 21st. At that time there were jactitations of all the limbs and of the muscles of the trunk and face. She had lost the power of speech. By means of a yoke lapping over the neck and shoulders, I attached two horseshoe magnets, each capable of supporting four pounds of iron, in such a way that one rested over the cervico-dorsal region of the spine, and the other over the sternum, the poles pointing downward. The magnets were applied at 1.30 P. M., on the 22d of August. At 1.55 all choreic movements had ceased. At 1.57 she spoke a few words: "Yes—no—I don't know." At 2.05 she said, "I want to go home, mamma." The magnets were then removed. Up to this date (September 15th), there has been no return.

Case II.—Similar to the first, but patient could speak. Magnets produced no effect, though repeatedly applied. Patient cured with arsenic in large doses.

Case III.—J. T., a girl aged eleven, was brought to me September 1st, to be treated for chorea. The case was unilateral, the movements being confined to the left side. One magnet was applied to the front of the left thigh, and the other to the cervical region of the spine. Movements ceased in eleven minutes. No relapse.

Case IV.—W. L., a boy aged seven, choreic for three weeks, movements general. No result from magnets. Cured in twelve days with arsenic.

Case V.—C. D., a boy aged nine, choreic for two months, very much debilitated, not able to walk without repeatedly falling, movements general. No result from magnets. Cured in two weeks with arsenic.

CASE VI.—R. D., a girl aged nine, choreic for six weeks, movements general. No result from magnets.

CASE VII.—J. L., a girl aged nine, choreic for six weeks, movements confined to face and neck. No result from magnets. Still under treatment with arsenic, improving.

CASE VIII.—D. T., a boy aged eight, choreic for a month, movements general. No result from magnets, though they were repeatedly applied and left on for an hour or more at a time.

CASE IX.—C. W., a boy aged seven, choreic for three months, movements confined to hands and face. No result from repeated application of magnets.

In all, I have used the magnet in nine cases of chorea. In two of them the effects were remarkable, complete cures being produced in a few minutes. In the seven others no result followed. It is probable that further observation will show that variations in the power of the magnets or the mode of application will be of advantage.

PARALYSIS FROM CEREBRAL HÆMORRHAGE.

CASE I.—J. R., a gentleman, an engineer by profession, and a speculator in mines, while rising from bed at about eleven o'clock on the morning of September 2d, felt slight dizziness, and fell to the floor, but without losing consciousness. His wife helped him to the bed. He was hemiplegic on the left side, and had lost the power of speech. I saw him at 2 P. M. He was then unable to speak, and was paralyzed on the left side, as regards both motion and sensibility. He could protrude the tongue, and it came out straight. Could swallow.

On the 7th, at 2.30 P. M., I applied a double horseshoe magnet, capable of sustaining ten pounds of iron, to the side of the body, the poles pointing upward. Just before attaching it, with a strong towel, I tested the sensibility of the hand and foot. No force of pinching gave rise to the slightest evidence of its being felt. He could not move a muscle of either the arm or the leg. At 2.37 I pinched the skin of the left forearm. He at once made a grimace, and reached over with the other hand to scratch the part. The skin of the face was also sensitive. At 2.40 the thigh, leg, and foot were sensitive. In fact, sensibility was restored to the whole of the paralyzed side.

I now left him, directing that the magnet should not be removed till my return. I saw him again at 5.25 the same day. He was then sitting up in bed and moving the left arm as well as he had ever done, and he could move the leg in all directions. I requested him to get up, which he did, walking across the floor without difficulty, and scarcely dragging the leg in the least. The face was still slightly paralyzed, and he could not yet speak a word. Before leaving him I fastened two small magnets, each capable of lifting half a pound of iron, one to the paralyzed side of the face, and one to the nape of the neck, the poles pointing upward, and directed that they should be left in position all night. The next morning a message came to say that he had recovered his speech.

This gentleman returned home a few days afterward, entirely recovered, so far as I could perceive, except that the left side of the face was slightly weaker than the right. On the 22d of September he had another attack, and died comatose.

CASE II.—This case is that of an eminent physician of this city, who, on the morning of September 30th, of the present year, became suddenly aphasic and hemiplegic. There was no loss of consciousness. I saw him at 2 P. M. of the same day, in consultation with Dr. W. H. H. Hall. The right side of the face was paralyzed, and motion was entirely lost in the right arm and leg. Cutaneous sensibility was abolished throughout the whole of the right side, as was also the sense of touch on the right side of the tongue. Patient retained the faculty of smelling, and the power of holding and passing the urine and fæces. He could not speak a word, but nodded or shook his head for yes and no. All the phenomena, as well as the previous history of the case, pointed to the existence of a clot, probably involving the left optic thalamus and the posterior third of the internal capsule. A year ago he had had a retinal hæmorrhage, and for several years had suffered from cirrhosis of the kidneys. The patient was kept quiet. I saw him every day with Dr. Hall, but no medicine was administered, except a solution of bromide of sodium in infusion of digitalis (the heart was very weak) and an hypodermic injection of morphia, to which he had for several months been accustomed, at bedtime.

Yesterday, October 4th, I saw the patient as usual. There were present his wife and his father, also a physician. His condition was unchanged, except that he could say "yes" and "no," and pronounce his own name after some one else. I pinched the skin of the forearm on the paralyzed side till my nails almost met through the skin, but there was no sensibility. I had taken with me a magnet, capable of sustaining about five pounds, intending to apply it as a therapeutical measure. My purpose was to place it against the left side, under the axilla, and to keep it in apposition with the surface by means of a towel passing around the body. While the towel was being got ready I laid the magnet against the paralyzed side, the poles pointing upward, in order to show his father how I designed employing it. It remained there less than three minutes, when I again quietly pinched the skin of the forearm, preparatory to applying the magnet more permanently. To my intense surprise, and that of all in the room, the patient gave a grimace, and, reaching over his body with the sound hand, took hold of the other and removed it to the opposite side of his chest. Upon examination, I found that the restoration of sensibility was thorough, and it has remained intact up to the present time. I left the magnet in contact with the body for several hours longer, but there was no further improvement.

If these cases stood alone, it might naturally be supposed that error existed somewhere, so contrary are they to our clinical experience and our ideas of the connection between the symptoms and the lesions in cerebral hæmorrhages. But they are not isolated. Within the last week I have met with the report of two cases of like character occurring to MM. Debove and Boudet, and reported by the former gentleman.* In the first of these cases the patient, a man aged forty-five, was suddenly struck with an apoplectic attack. There was complete hemiplegia of sensibility on the left side, and the power of motion, though not altogether abolished, was much diminished. There was sensory hemianæsthesia—smell, taste, hearing, and sight on the left side being abolished or impaired. There was also color-blindness.

Six days after the attack, when the condition was unchanged, at 6 P. M., two magnets were applied to the left side, one against the thorax and the other to the knee. At 6.30 the patient felt a severe pain in the head; at 7, the pain had disappeared; at 8, sensibility and motility had begun to reappear; at 8.30 the magnets were removed, and the patient was carefully examined. It was found that the general sensibility had returned to the whole of the previously anæsthetic region, that the patient walked easily without dragging the limb, that the strength of the left hand had increased over fivefold, that the taste, smell, hearing, and sight were entirely restored, and that the ability to distinguish colors was regained.

The other case was that of a woman, aged sixty-five, who on the 30th of March had an apoplectic seizure. Complete right hemiplegia and hemianæsthesia, from the face downward. Integrity of the special senses impaired, but not completely abolished. On April 8th, at 3 P. M., a strong magnet was placed between the arm and the chest on the right side, the poles pointing toward the axilla. Ten minutes after this application the sensibility had returned to the arm, and at 3.30 it was complete over the whole of the paralyzed side.

---

* Note sur deux nouveaux faits d'hémiplégie de la motilité et de la sensibilité. Guérison par une application d'aimants ("Archives de Neurologie," I, 1, p. 92).

The magnet was left in its position for eighteen hours. On the 9th, the patient could walk about the room, and had begun to talk, and on the following day there was no trace of paralysis, either of motion or of sensibility, except a slight hesitation in motion.

It appears to me that all these cases, as well as those of hysterical hemianæsthesia which have been reported as cured by the magnet and other metallic applications by Charcot and his pupils, are instances in which, if there were any organic lesion at all, this was mainly situated in the optic thalamus. It is well known that the hemianæsthesia, as well as the hemiplegia, due to lesions of this organ, is more or less transitory in character, and that the former often suddenly disappears after persisting a few days, or even hours. It would be asking too much to claim that the cures in the instances cited, whether of chorea or of paralysis, were due to any specific influence of the magnet. It is possible that the association was a mere coincidence, or that the relief was due to a strong mental impression made on the mind of the patient. At any rate, the cases are interesting as facts, and are worthy of being allowed to exert an influence in directing further inquiry. As such, they are submitted to the consideration of the Neurological Society.

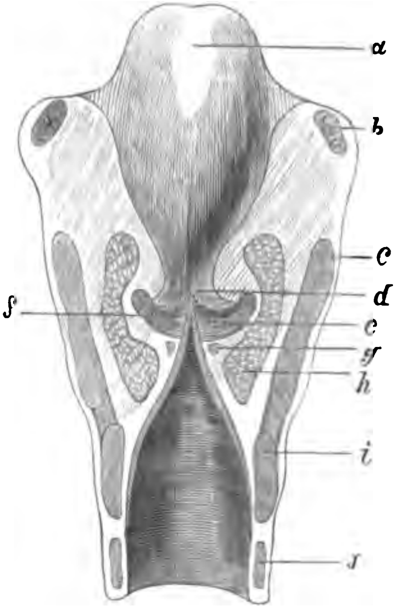
BILATERAL PARALYSIS OF THE ABDUCTOR MUSCLES OF THE LARYNX.

BY FRANK H. BOSWORTH, M. D.,
CLINICAL LECTURER ON DISEASES OF THE THROAT IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

THAT pair of muscles whose special function consists in their action as glottis-openers possess an interest which is somewhat unique, both from a physiological point of view and from the fact that any morbid condition which involves an abolition of their healthful activity is attended with the gravest and most serious consequences. They arise from the posterior surface of the cricoid cartilage, and are inserted into the outer angle of the arytenoid. By their contraction they rotate the arytenoids outwardly, thus separating the vocal cords and opening the rima glottidis. This function lies entirely and exclusively in this pair of muscles, and Nature has provided no other means by which the glottis can be opened. This so-called respiratory function of the larynx is brought into play with every act of inspiration, rendering this pair of muscles among the busiest in the body, in that they are kept in a state of constant activity from the first breath drawn in infancy until death puts an end to all functions.

By the peculiar conformation of the vocal cords, while expiration is purely passive, and the exit of the current of air is permitted without muscular action on the glottis, the entrance of the current of inspired air is arrested unless the cords are separated by the action of the glottis-openers, or crico-arytænoidei postici muscles. The upper surface of the vocal cords is broad, flattened, and somewhat depressed or excavated, in such a manner that the current of in-going air, striking them from above, while the cords are approximated, tends to throw them still closer together, in a way very much resembling the action of the semilunar valves of the heart. In other words, the rima glottidis is more or less completely closed to the entrance of air by the valve-like action of the vocal cords unless this little pair of muscles open it by their contraction, as shown in the figure on the next page:

This action of the glottis-opening muscles is of course purely involuntary, in that it is entirely beyond the control of the will, and also that it must necessarily go on during sleep, as well as during waking hours. It is also reflex, and does not take place except under the influence of an in-going current of air impinging upon the laryngeal cavity, for, as we know, after the operation of tracheotomy, it ceases, and, if we examine the larynx of a patient wearing a tracheal tube, we find the cords at perfect rest. Reasoning from analogy, we are justified in the conclusion that this glottis-opening function of the larynx is presided over by an independent ganglionic center, situated in the brain, but which neither physiological experiment nor pathological investigation has as yet been able to locate. Since the introduction of laryngoscopy, there have come within our notice a group of grave laryngeal affections, characterized by a peculiar set of symptoms, which laryngoscopic investigation shows to be due to the abolition of this glottis-opening action in the larynx during inspiration.



a, epiglottis; *b*, hyoid bone; *c*, thyroid cartilage; *d*, ventricular band, or false cord; *e*, ventricle of the larynx; *f*, rima glottidis; *g*, true vocal cord; *i*, cricoid cartilage; *j*, first ring of the trachea. (Bristowe.)

Under the name of bilateral paralysis of the abductors of the larynx, or of the crico-arytænoidei postici muscles, are included a number of cases in which the symptoms present something like the following picture: The patient begins to suffer from a peculiar dyspnœa, in which the difficulty attends the inspiratory act entirely, and not the expiratory act. This is generally spoken of as inspiratory dyspnœa. Accompanying this constant state of dyspnœa, the patient also suffers, as a rule, from exacerbations, or spasmodic attacks, recurring with more or less frequency, in which all the symptoms are markedly aggravated, and which may excite the gravest apprehension, according to the extent of the interruption to the entrance of air into the lungs. Accompanying this apparently very grave laryngeal obstruction, it is noticeable that the voice is not affected or is but little impaired. This feature of the disease often seems an extremely surprising one. Remembering, however, the morbid condition which gives rise to the affection, we can easily understand why this should be. The grave symptoms of the disease occur in connection with inspiration, while phonation is accomplished under the action of those muscles which are unimpaired, and during the act of expiration.

These attacks of inspiratory dyspnœa, mild at the onset of the affection, and not giving rise to any serious apprehension, gradually become more serious in character; and, in addition to this, the spasmodic attacks recur with greater frequency and become of a more urgent type, until finally, unless the disease is arrested, tracheotomy becomes necessary, and, furthermore, the wearing of the tracheal cannula during life. This, however, would simply indicate that, where a case has gone on to such an extent that tracheotomy is imperatively demanded, the muscles have become so disorganized that all hope of restoring them to healthy action is lost; and, apart from this healthy action, we possess no means by which the entrance of air can be secured through the larynx. Hence tracheotomy becomes an absolute necessity. The glottis is closed, and it should be added that this closure of the glottis is not due alone to paralysis of the abductor muscles, but the essential gravity of the affection lies in the fact that the crico-arytænoidei laterales muscles retain their integrity; that is, paralysis of the abductor muscles is not alone sufficient to produce the affection, but the adductor muscles, being unopposed in their action, rotate the arytenoid cartilages inward, and thus bring the cords into apposition. A perfect closure is then accomplished, and a total arrest of the entrance of air, by the valve-like action of the vocal cords, which is only manifest of course when the cords are in apposition. Hence, it seems to me, there can be no doubt that, if we have both the muscles paralyzed, as occurs in paralysis of both recurrent laryngeal nerves, we do not get the condition which I have described. We shall perhaps get a clearer apprehension of this when we come to the consideration of special cases.

In the last four years four of these cases have come under my notice, which I proceed to relate, in connection with a brief *résumé* of a number that I find reported by others.

CASE I.—Richard Dowling, Irish, aged forty-six, a sailor, came to the clinic at Bellevue in February, 1875, with the following history: Fifteen years ago he had a primary sore, but never had any secondary or tertiary developments of syphilis, other than alopecia and osteocopic pains. For a year before coming under notice, he had been suffering from gradually increasing shortness of breath, and within two months had been subject to attacks of dyspnœa, recurring with greater frequency, and at times of an exceedingly alarming character. An examination made at this time by Dr. Bangs, and also by myself, revealed complete paralysis of the abductor muscles of both sides. The cords were quite motionless, with but a narrow opening between them. There was also a considerable degree of chronic inflammation of the mucous membrane lining the larynx. A careful examination of the chest, repeated several times, and made with special reference to the possibility of aneurism, revealed no morbid condition. Various plans of treatment were carried out in this case, especially the administration of large doses of iodide of potassium, but without any effect on the symptoms or the laryngoscopic appearances. He made a number of visits at the dispensary, and several times during the examinations he had attacks of dyspnœa which were of so grave and alarming a character that a fatal issue was feared. On the 21st of March, 1875, laryngotomy was done by Dr. Katzenbach, the tube being inserted through the crico-thyroid membrane. Aside from ulcerations occurring on the posterior wall of the trachea, produced by the irritation of the tube, and resulting in fungus-like granulations, which bled occasionally, the case presented no new symptoms, and the tube was worn until death occurred, on the 28th of November, 1877. He died with symptoms of spinal meningitis. No autopsy was permitted.

CASE II.—In May, 1878, I was asked by Dr. Walker to see a patient in Bellevue Hospital suffering from urgent dyspnœa. I found the man, a sailor, aged forty, suffering from the peculiar inspiratory dyspnœa which suggested bilateral paralysis of the abductors. A laryngoscopic examination showed the peculiar motionless condition of the vocal cords, with marked hyperæmia of the mucous membrane. His voice was husky, but not lost. He gave a clear history of having had syphilis ten years before. A year before I saw him he had begun to suffer from moderate shortness of breath, with occasional attacks of dyspnœa of an apparently spasmodic character. These attacks recurring with greater frequency and severity, he came to Bellevue, where I saw him on the day after his admission. I advised tracheotomy, but, the attack subsiding very soon, it was not done, and the man left the hospital a few days afterward suffering from mere shortness of breath. A few days subsequently, another paroxysm coming on, he was taken to St. Luke's Hospital, where tracheotomy was done, after which he was subjected to treatment by electricity, in connection with the internal administration of iodide of potassium, with an apparent slight improvement, as often occurs in these cases. It was delusive, however, and he subsequently left the hospital with the tube in, and was lost sight of.

Case III.—On August 9, 1880, I was requested by Dr. J. A. McCreery, of this city, to see a patient with the following history: M. Q., Irish, aged forty-eight, a laundress, of good family history, had complained for over a year of a feeling of discomfort in the throat, which caused no special uneasiness until April, 1880, when she began to have some difficulty in swallowing. At this time there was some induration of the cervical glands, with œsophageal obstruction, as evidenced by the passage of the bougie; but the laryngoscopic examination revealed no morbid condition. Early in July, however, there was noticed, projecting from the orifice of the œsophagus, an irregularly nodulated mass, presenting the characteristic appearances of epithelioma, serving to confirm the suspicion already entertained that the disease was epithelioma of the œsophagus. On August 6, 1880, Dr. McCreery requested me to see her, and my diagnosis, of course, was only confirmatory of his. I saw the patient a number of times, and observed the progressive increase of the tumor, together with a deficient action of the glottis-opening muscles, which seemed to be more marked each time I saw her. This was also evidenced by recurring attacks of dyspnœa, which were of a spasmodic nature, and which soon became of an alarming character. I last saw her on September 27th. At this time the action of the abductor muscles seemed to be completely abolished, and, as the dyspnœa was quite marked, I advised that tracheotomy be done. Preparations were being made for the operation, when she suddenly expired, early on the morning of September 29th. Death resulted from the paralysis, as the tumor in no way encroached upon the larynx. The paralysis in the case was due, of course, to the infiltration of the muscular fibers by the malignant growth.

Case IV.—E. C., a Frenchman, aged forty-two, a merchant, consulted me, August 19, 1880, at the request of Dr. A. Borde, of New Orleans, and gave the following history. He had always enjoyed good health, with the exception of occasional attacks of palpitation of the heart, which he had been told was due to an enlargement of that organ. The pulse was always quite rapid, but his heart trouble had never given him any uneasiness. He had always lived a perfectly temperate life, and indulged in no excesses. He was not in the habit of using tobacco, and never drank spirituous liquors. For ten years he had been subject to occasional attacks of dyspnœa, which were always of an inspiratory character, inspiration being attended by a noisy stridor while the attack lasted, which was generally from two to five minutes only. There was no marked difficulty in deglutition, yet he was compelled to swallow quite slowly, or the act would bring on an attack of dyspnœa. He had formerly been fond of singing, but had been compelled to abandon it, as the voice had become weakened, and tired easily. Moreover, prolonged use of the voice or loud talking was apt to bring on the spasm. The uvula and the tonsils had been removed, but with no result. Physical examination of the chest showed the lungs perfectly healthy. The heart was moderately enlarged. Pulse, 96.

An examination of the larynx revealed the characteristic appearance of bilateral paralysis of the abductor muscles. The cords were in a state of parallelism, about one line apart, and quite motionless. The mucous membrane lining the larynx was in a state of chronic catarrhal inflammation, and somewhat relaxed. In addition to this, there was a markedly relaxed condition of the vocal cords, constituting the so-called elliptical paralysis, or paralysis of tension.

The singular feature of the case was the long standing of the paralysis without tracheotomy having become necessary. This is partially accounted for by the existence of the elliptical paralysis, which, of course, increased the area of the breathing space. Another element of the case, also due to his chronic laryngitis, which thus became eminently a conservative condition, was a certain amount of thickening of the inter-arytenoid commissure, which served to hold the arytenoid cartilages apart during inspiration. The result of these two conditions was, of course, to render the voice somewhat weak, but, on the other hand, they so widened the rima glottidis that quiet respiration was carried on with comparative ease.

Case V.—Riegel,* in 1872, reported the case of a boy five years of age, who, during his second year, had an attack of quinsy, from which he recovered without any bad results. In his third year he began to suffer with inspiratory dyspnœa, the voice remaining unimpaired. At the end of his fifth year he was brought under Riegel's notice in a weak and emaciated condition, with enlarged and suppurating lymphatic glands. Laryngoscopic examination revealed the characteristic appearance of bilateral paralysis of the cords. Therapeutic measures were powerless to relieve, and the patient died from a subsequent attack of measles with pneumonia. An autopsy in this case revealed both recurrent laryngeal nerves compressed by dense connective tissue, and the nerve fibers in a state of fatty degeneration and atrophy. The pneumogastric and sympathetic nerves were normal. The crico-arytænoidei postici muscles were in a state of atrophy, while the other muscles of the larynx were normal.

Case VI.—Riegel,† in December, 1874, reported the case of a man, fifty-eight years of age, a guide by occupation, who was admitted to the hospital in Cologne, giving a history of attacks of dyspnœa, cough, and expectoration, of a month's standing. He had the characteristic inspiratory dyspnœa, and breathing was very labored. Laryngoscopic examination revealed bilateral paralysis of the cords, with the mucous membrane in a state of catarrhal inflammation, with ulceration. Tracheotomy was done

* Von Ziemssen, from "Berlin. klin. Wochenschrift," Nos. 20, 21, 1872; No. 7, 1873.

† Von Ziemssen, from Volkmann's "Sammlung klin. Vorträge," No. 95.

the day following his admission. The man had also serious pulmonary disease, which was undoubtedly aggravated by the introduction of the tube. Death occurred one week after the operation, from the lung disease. On port-mortem examination, the posterior crico-arytenoid muscles were found to be in a state of complete atrophy, scarcely a trace of muscular tissue being found. All the other laryngeal muscles were normal, as were the recurrent and pneumogastric nerves.

CASE VII.—Penzoldt * reports the case of a woman, sixty-one years of age, who came under his observation, with a history of former syphilis and cerebral apoplexy. She presented extensive cicatrices in the pharynx and soft palate. She gave the clinical history of inspiratory dyspnœa. Laryngoscopic examination revealed the cords motionless in the median line, with a moderate degree of catarrhal inflammation of the lining membrane of the larynx. Tracheotomy was done to relieve dyspnœa, but death ensued in a few days, the result of an existing pulmonary disease. Post-mortem examination revealed a degeneration of the crico-arytænoidei postici muscles, while the other laryngeal muscles were normal. There was a moderate degree of degeneration of the recurrent nerves, extending to the pneumogastric and spinal accessory, with moderate sclerosis of the medulla oblongata.

CASE VIII.—Feith † reports the case of a woman, sixty-eight years of age, who was seized with an attack of facial erysipelas, which was followed by a double pneumonia, both of which underwent fair resolution; but at the end of the sixth week after the attack of erysipelas, and two weeks after the resolution of the pneumonia, she was suddenly seized with paroxysms of inspiratory dyspnœa, which, gradually increasing, became of an extremely alarming character, the voice not being impaired. The laryngoscope showed paralysis of abduction, the laryngeal cavity being otherwise normal. At the end of four or five days after the first onset of the dyspnœa, tracheotomy became necessary. Electrical and other treatment failed to accomplish any good result, and the patient continued to wear the tube.

CASE IX.—H. von Ziemssen ‡ reports the case of a man, aged twenty-six, who had always enjoyed good health, and who on New Year's day of 1871 was seized with dyspnœa of an inspiratory character, followed by recurring exacerbations. These recurred at first only at night, but, gradually increasing, appeared during the day, being brought on by any unusual effort. The symptoms growing worse, on August 11, 1871, seven months and a half after the beginning of his trouble, he was compelled to seek hospital treatment, at which time the laryngoscope showed the motionless condition of the vocal cords, with moderate injection of the mucous membrane lining the larynx. The voice was not much impaired; no traces of syphilis were found. He was placed under treatment by

---

* VON ZIEMSSEN'S "Cyclopædia," vol. vii, p. 962.

† Ibid.

‡ Ibid., vol. vii, p. 963.

electricity, which was continued for six weeks, when he was discharged cured.

Case X.—Mackenzie * reports the case of an American gentleman, aged sixty-one, a lawyer, who for thirty years had complained of a weak voice. For eighteen years he had been subject to cramps in the throat, and for eight years had suffered from dyspnœa, which had gradually but slowly increased. The examination revealed paralysis of the abductor muscles. Tracheotomy became imperative, and the gentleman is still wearing the tube.

Case XI.—Rehn † reports the case of a boy of thirteen, convalescing from an attack of typhoid fever, who was attacked fourteen days after the cessation of the fever with shortness of breath, which was increased by the slightest exertion. Laryngoscopy showed complete paralysis of abduction of the cords. Tracheotomy was done, the tube being worn fifteen weeks, and the patient kept on a supporting and general tonic treatment. At the end of this time the tube was removed, the cure being satisfactory.

Case XII.—Dr. Lefferts ‡ reports the case of a robust Irish woman, about forty years of age, who came to him on the 8th of May, 1876, with a history of what was probably an attack of mucous patches in the mouth, five years before, with a recurrence of specific disease in the form of extensive ulceration in the fauces in December, 1875. A few days previous to her visit, she began to suffer with difficulty in breathing, which was at first but slight in character, and only noticeable after an unusual exertion and at night; gradually it began to show itself during the day also. The voice was unaffected. There was the characteristic inspiratory dyspnœa. Laryngoscopic examination showed complete paralysis of the abductors, with a slightly reddened condition of the mucous membrane. She was immediately put on full and increasing doses of iodide of potassium, with the most excellent results, as all evidences of the disease had disappeared at the end of six weeks.

Case XIII.—Dr .Lefferts (*l. c.*) reports a second case, that of a woman thirty-five years of age, who gave a very clear history of syphilis. In October, 1877, she contracted a severe cold, soon followed by difficulty of breathing, with hoarseness. This increased rapidly until the dyspnœa became distressing and constant. This passed away, however, under treatment, but in April, 1878, as the result of a fresh exposure, a progressive dyspnœa again set in, which did not yield to treatment. During the second week she had paroxysmal attacks of dyspnœa both day and night. On June 1, 1878, Dr. Lefferts saw her, after a very grave and alarming attack of dyspnœa. When he first saw her the subjective symptoms were not prominent, but laryngoscopic examination showed complete paralysis of the abductors of the vocal cords, with the whole mucous membrane lining the larynx in a state of hyperæmia. She was immediately placed under the influence of iodide of potassium with mercury, with most excellent results. The subjective symptoms disappeared, and a satisfactory condition of mobility of the cords followed.

---

* Mackenzie, "On the Laryngoscope," p. 217.

† Von Ziemssen's "Cyclopædia," vol. vii, p. 965.

‡ "New York Medical Journal," December, 1878.

Case XIV.—Dr. Cohen* reports the case of a gentleman, forty-six years of age, whose only vice had been the excessive use of tobacco, who consulted him, giving the history of cough, dyspnœa, and occasional attacks of spasm of the glottis, extending over two years. The spasm was induced always by the irritation of the external auditory meatus. Laryngoscopic examination showed paralysis of the left abductor muscle. The spasms recurred with such violence that tracheotomy became necessary. Very soon after the operation the muscles of the right side also became paralyzed, and the glottis remained so entirely closed that Dr. Cohen suspected spasm of the crico-arytænoideus lateralis and arytænoideus muscles. The patient continues to wear the tube, all treatment having proved useless.

Case XV.—Burow † reports the case of a man, aged sixty-two, who came to his clinic January 5, 1879, with a history of dyspnœa of four months. The inspiration was very noisy; the voice was normal. Laryngoscopy revealed the usual picture of paralysis of the abductors. January 14th the trachea was opened, but the patient died from pulmonary disease two weeks later. The autopsy revealed a hyperplastic mass pressing on both recurrent laryngeal nerves, with atrophy and fatty degeneration of the two abductor muscles.

Case XVI.—Meschede, of Königsberg,‡ reports a case as follows: A girl, aged nineteen, was brought to him by her mother, with the history of complete aphonia of two months' standing. There was some bloody expectoration, but no signs of lung disease. The prominent symptoms were those of marked inspiratory dyspnœa, with noisy inspiration at all times, but extreme on slight exertion. Menstruation had ceased for several months. The laryngoscopic examination was made with difficulty, but revealed the approximation of the cords. There was a suspicion of hysteria; but this diagnosis was abandoned, on the ground that the cords could not be maintained in a state of approximation so long a time. The false color in the picture here of course was the aphonia, but it was interesting to note that, under the threat of using the actual cautery, she recovered the use of the voice. The dyspnœa persisted, however, and finally yielded only to the subcutaneous injection of strychnia. After four months' treatment she was entirely cured.

Case XVII.—Among Dr. Warren's surgical cases § I find the following: A child aged three, was brought to the hospital, July 17, 1876, with the following history: Eight months ago he had a severe cough, followed in three weeks by enlargement and finally suppuration of the cervical glands. At this time the child, though not well, was not really sick. About the middle of January the voice became husky, and the child began to suffer from inspiratory dyspnœa. The symptoms were alarming for a time, but finally an improvement set in, and was progressing fairly, until, a few weeks before the child was brought to the hospital, they recurred in an alarming degree, the prominent features being marked inspiratory dyspnœa, with noisy inspiration and recurring paroxysm of a serious character. Dr. Knight now saw the child, and made the diagnosis of paralysis of the abductors of the larynx. On July 21, 1875, tracheotomy was done. Treatment for the relief of the paralysis was of no avail, and I learn from Dr. Knight that the child, now eight years old, still wears the cannula.

---

* "Diseases of the Throat," 2d ed., p. 654.

† "Berliner klin. Wochenschrift," Nos. 33, 34, 1879. ‡ Ibid., No. 17, 1878.

§ "Boston Med. and Surg. Jour.," August 31, 1876.

Case XVIII.—Dr. John S. Blake * reports the following: A girl of six years was brought to him October 25, 1876, with the following history. Six months before she had scarlet fever and diphtheria of unusual severity, but had made a perfect recovery. A week before he saw her she had a croupy cough, with noisy breathing at night. The voice was unaffected. A yellowish exudation was found on the tonsils. The symptoms becoming worse, Dr. Knight was called to see her, and on laryngoscopic examination discovered the characteristic appearances of paralysis of the abductors, and advised tracheotomy. This was deferred for a few days, but was finally resorted to when the patient was *in extremis*. The respiration was established, and treatment at the same time was instituted for the deposit, which was probably diphtheritic. At the end of a week the tube was removed and recovery was complete.

Case XIX.—Dr. Knight † reports the following case. A man aged thirty-six, a ship-carpenter by trade, was referred to him by Dr. Ingalls in September, 1868, with the following history. In 1854 he had had a primary sore, followed in six months by an eruption on the skin, and in the years following, up to the time Dr. Knight saw him, he had repeated attacks of rheumatism, skin eruptions, and sore-throat. In December, 1867, he began to have sore-throat with hoarseness, and to fail in strength. A laryngoscopic examination at the time revealed the chronic laryngitis of syphilis. After treatment for two weeks, he was improving, when he disappeared, and was not again seen until August, 1869, when he presented himself with a tube in the trachea, which had been inserted in March, seven months after he had disappeared, for a progressive dyspnœa. An examination showed paralysis of the abductors. He continued to wear the tube.

Case XX.—Dr. Glynn ‡ reports the case of a man, aged thirty-six, who was admitted to the Royal Infirmary in Liverpool, January 16, 1877, suffering from inspiratory dyspnœa, etc., the result of an exposure to cold three weeks previously. Examination showed acute inflammation of the membrane of the larynx and fauces, with paralysis of the abductor muscles. Local and internal medication was of no avail, and tracheotomy became necessary, January 19th. The local application of electricity was now used, and in two months the tube was removed. As late as June 20th there had been no recurrence of the trouble.

---

* "Boston Med. and Surg. Jour.," August 23, 1877.

† Ibid., September 30, 1869. ‡ "Lancet," September 1, 1877.

Case XXI.—Dr. A. H. Smith* reports the following case. F. C., aged fifty, a messenger, consulted Dr. Smith, on September 8, 1877, suffering from an urgent dyspnœa, which had been coming on two years, but had grown much worse during the previous fortnight. The voice was husky, but otherwise normal. An examination showed the cords motionless in the median line, with a moderate hyperæmia of the mucous lining of the larynx. The patient gave a clear history of syphilis, contracted ten years before, followed by secondary lesions. Tracheotomy was done the following day, and the patient was put on the use of full doses of iodide of potassium, and localized faradization was used. The treatment resulted in complete cure of the paralysis at the end of four weeks. The tube causing considerable irritation, it was removed. Six weeks later the disease returned suddenly, and before the operation could be repeated the patient died.

Case XXII.—Dr. Knight† reports the case of a lady, aged sixty, who, after a slow convalescence from typhoid fever, developed a cough with hoarseness, which finally resulted in dyspnœa of a spasmodic character. This becoming severe in character, tracheotomy was done. Treatment was of no avail, and the tube was worn permanently.

Case XXIII.—Dr. Robinson,‡ of New York, reports the following. A railway detective came under his care, with a clear history of syphilis of seventeen years' standing. In addition to some general nervous symptoms, he began to have marked dyspnœa two years before, characterized by exacerbations recurring with more or less frequency. Examination of the larynx showed paralysis of the abductors. He was put under specific treatment with but little avail; but, the symptoms not being sufficiently urgent, tracheotomy was not done, and he was subsequently lost sight of.

Case XXIV.—Juraz§ reports the following case. The patient, during convalescence from typhoid fever, which set in May 1, 1877, was seized with dyspnœa of the peculiar inspiratory character, the voice not being impaired. This increased, and on June 28, 1877, two days after the dyspnœa set in, tracheotomy became imperative. June 20, 1878, a year afterward, still wearing the cannula, he went to Czerny, who for the first time made application of electricity, and found good reaction in all the laryngeal muscles, except the abductors, but in these only a very feeble reaction.

---

* "Am. Jour. of the Med. Sci.," January, 1878.

† "Boston Med. and Surg. Jour.," February 25, 1869.

‡ "Am. Jour. of the Med. Sci.," April, 1878.

§ "Deutsche med. Wochenschrift," April 5, 1879.

Several months of treatment, however, failed to give any permanent results.

CASE XXV.—Whipham * reports the case of a cabman, aged twenty-six, who came to the out-patient department of St. George's Hospital, with the history of syphilis beginning three years before. For three months he had had sore-throat, with some dyspnœa and inspiratory stridor. Examination revealed a laryngitis, with almost complete bilateral paralysis of the dilators. His laryngitis was cured, but the paralysis remained much the same, and, under treatment for sixteen months, there was no improvement. Tracheotomy was not performed.

CASE XXVI.—Dr. Weber † reports the following case. A man, aged thirty-seven, had been somewhat hoarse for two years, and for four months had shown decided evidence of phthisis. There was no history of syphilis. Sudden and marked dyspnœa set in, of the peculiar inspiratory character, which at the end of one week demanded tracheotomy. At the end of a month there was no improvement in the paralysis. There is no later report.

CASE XXVII.—Hughlings Jackson ‡ reports the case of a man, aged thirty-five, who came under his care December 5, 1864, with the history of having had syphilis several years before. For four years he had had more or less inspiratory dyspnœa. December 23d tracheotomy was done. The following night he died from suffocation, the tube having become occluded with mucus. The autopsy revealed complete atrophy of the abductor muscles. The pneumogastric and recurrent nerves were perfectly healthy.

CASE XXVIII.—Hayes § reports the case of a man aged thirty-one, who came under his care August 4, 1879, with the history of dyspnœa of inspiratory character of two months' standing. He had had a chancre eight years before. Examination revealed paralysis of the abductors. Under treatment for two months and a half by iodide of potassium and electricity he was cured.

CASE XXIX.—Mackenzie ‖ reports as follows: J. H., aged forty, was admitted to hospital in January, 1878. Twenty-one months previously he had caught cold, which resulted in a severe dyspnœa, which had increased slowly until he applied for admission to hospital, when the symptoms were so urgent that tracheotomy was done immediately. The patient died two months afterward. An examination previously had revealed paralysis of the abductor muscles. The autopsy disclosed an abscess in the posterior wall of the cricoid cartilage, which had destroyed the abductor muscles.

CASE XXX.—Mackenzie ¶ reports the following: C. E., aged thirty-

---

* "St. George's Hosp. Reports," 1878.

† "Phila. Med. Times," June 19, 1880.

‡ "Med. Times and Gazette," December 15, 1866.

§ "Dublin Jour. of Med. Sci.," January, 1880.

‖ "Diseases of the Throat and Nose," vol. i, p. 445. ¶ Ibid., vol. i, p. 443.

four, a gymnast, was admitted to hospital November 22, 1876, with the history of a chancre eighteen years previously. For eight months he had been subject to recurrent attacks of dyspnœa. He was very short of breath, but the voice was normal. Tracheotomy was done, but the patient died eight days afterward from pneumonia. An autopsy revealed degeneration of the abductor muscles. The nerves were healthy. The brain was not examined.

These cases comprise but a part of the number which have been reported; but they are mainly selected as giving information as to the cause, clinical history, and pathological changes which belong to the affection. Many well-known cases have been rejected as incomplete and adding nothing to our information of the disease. Among these cases may be noticed Gerhardt's,[*] Duranty's,[†] Semon's,[‡] Smith's,[§] Mackenzie's,[‖] Heinze's,[¶] Klemm's,[**] and Guttmann and Frankel's.[††]

In glancing over the causes of the above-detailed cases, we find that there were due to

	Cases.
Syphilis	12
Convalescence from typhoid fever	3
Erysipelas	1
Chronic nicotine poisoning	1
Localized inflammation	2
Scrofula	1
Diphtheria	1
Epithelioma	1
Phthisis	2
Hysteria	1
No causes recorded in	5

We thus find that syphilis is responsible for forty per cent. of all the cases. Of these twelve patients, eight had tracheotomy performed, and were compelled to wear the tube during life, two of them, however, dying within a few days after the operation from intercurrent causes. Three of the four patients in whom the trachea was not opened were cured by internal medication. The fourth, Whipham's, seems not to have developed any very alarming symptoms, although under observation nearly two years.

---

[*] Von Ziemssen's "Cyclopædia," vol. vii, p. 959.

[†] Ibid., p. 965.

[‡] "Lancet," April 20, 1878.

[§] "British Med. Journal," July 13, 1878.

[‖] Cases 4, 5, 6, and 8, "Diseases of the Throat and Nose," vol. i, p. 444, *et seq.*

[¶] "Archiv für Heilkunde," xvi, 1875.

[**] Ibid., 1876, p 516.

[††] "Berliner klin. Wochenschrift," No. 10, 1878.

In the cases cured by the administration of medicine the disease had existed respectively, a few days, six weeks, and two months. In the patients who wore the trachea tube permanently, leaving out of consideration the one that died, we find that the disease had existed in two cases two years, in three cases one year, and in one case six months.

The deduction from this is obvious. Prominent among the causes of the disease stands the syphilitic poison, which acts by producing some degenerative change that, if not arrested promptly, will go on to the complete destruction of the functional activity of the organ involved beyond the possibility of its restoration. On the other hand, if the disease is recognized sufficiently early, we may entertain fair hope of cure by internal medication. In one case erysipelas was apparently the cause. In this case, although the operation was done early, the tube was worn during life.

The case of Meschede has been introduced as affording some points of interest, but it is scarcely to be accepted as a genuine case of the disease under consideration. I have also added my own case of epithelioma and Weber's case of laryngeal phthisis, as illustrating the manner in which a localized morbid process may extend to the muscular structures to disintegrate and paralyze them, thus becoming another cause of this disease.

We also see that, in addition to syphilis, any blood poison may produce this affection; but there lies this difference: the slowly acting, chronic blood poisons—syphilis, scrofula, nicotine poisoning, etc.—have, in the cases cited, led to irreparable morbid changes, which have resulted in a paralysis not amenable to treatment; while the acute blood poisons, such as those of typhoid fever, diphtheria, etc., have resulted in a temporary paralysis, which, though of very aggravated character, and requiring tracheotomy, has yielded to treatment, and resulted in complete cure.

As regards the true pathology of the disease, it seems to me that the clinical histories of the cases given shed more light on it than the autopsies which were made: of these there were eight. In one of them a tumor was found pressing on both recurrent laryngeal nerves, with atrophy of the abductor muscles; in one, cicatricial bands pressing on each recurrent nerve, with atrophy of the abductors; in one case, degeneration of the recurrent nerve, also of the pneumogastric and the spinal accessory, with sclerosis of the medulla; but, in the remaining cases, there was found simply atrophy of the muscles, while the nerves were unimpaired.

It will be noticed that, in all the cases examined post mortem, the muscular structures were destroyed by degenerative changes, while the nerves supplying them were perfectly healthy in two cases and diseased in three. Furthermore, it will be observed that the muscular atrophy was confined to the abductor muscles alone, while the other muscles of the larynx, although supplied by the very nerves which were in a diseased state in three cases, and healthy in five, retained their normal integrity.

The question arises, Does the seat of the original morbid changes which produce the paralysis lie in the nerve trunks? I do not see how this view of the subject can be entertained for a moment. Any disease of the recurrent laryngeal nerve, which has progressed so far as to destroy its conductivity, must destroy and paralyze all the muscles which it supplies. In two of the cases narrated there was found pressure on both nerves, and yet the abductor muscles alone were atrophied, while the others were healthy; moreover, during life, in these cases, the other muscles were in a state of healthy functional activity.

As was said in the beginning of the paper, the essential gravity of the disease lies in the integrity of the crico-arytænoidei laterales muscles—the opposing muscles to the abductors; and, if these muscles were also paralyzed, as they must necessarily be, were the conductivity of the nerve destroyed by disease, no dyspnœa would exist; the glottis would fall into the position known as the cadaveric position, which, as we know, is sufficiently wide to allow of free and unimpaired respiration. This is illustrated by those rare cases, one or two of which have been reported, in which there was pressure on both recurrent laryngeal nerves, and in which the prominent symptom was complete aphonia, without dyspnœa. The fact that the voice is unimpaired, as a rule, in paralysis of the abductors is sufficient evidence that the other muscles of the larynx are in a healthy state. As to the suggestions I have seen made occasionally, that the disease is due to pressure on the recurrent nerves, and that this pressure may so far discriminate between the nerve fibers as to destroy the conductivity of those fibers alone which are distributed to the abductor muscles—that this might happen on one side alone, and that a tumor pressing upon the trunk of the recurrent nerve might so far select its points of pressure as to paralyze the abductor muscle of that side, is among the possibilities. That this should happen on both sides, and to both recurrent nerve trunks, would be one of the rarest of coincidences. That it should happen in a large series of cases is simply beyond the pale of possibility.

I think, then, that we must look still further for the morbid condition which produces the disease, and not in the nerve trunks which supply the muscles of the larynx. As suggested in the early portion of the paper, reasoning from analogy, considering the peculiar character of the respiratory movements of the larynx, in that they are purely involuntary and also reflex; that the opening of the glottis, constituting the respiratory movement, is an independent action separated from all the other movements which take place in the larynx as the result of muscular contractions—it is fair to conclude that this function is presided over by an independent ganglionic nerve center, and that the disease in question consists in some degenerative change taking place in this portion of the brain; that it occurs most frequently as the result of syphilis, but that it may also occur under the influence of any of the blood poisons; and that these changes become permanent and incurable unless arrested very early in the career of the disease.

Mackenzie,* writing of this affection, makes the assertion that it is due to some central lesion in the brain. And he is the only writer that I find who ventures to assign any cause for the disease.

---

* "Hoarseness, and Loss of Voice," 1869.

In the autopsies made—in three there was nerve lesion; in all, muscular atrophy. For reasons already given, the nerve lesion could not paralyze the abductor muscles without paralyzing the opponent muscles also. We must, therefore, conclude that these nerve lesions are due to the same cause which, acting on the nerve center which presides over the respiratory movements of the larynx, has led to degeneration, and that they have occurred subsequently to it; or that the nerve lesions, occurring first, have reacted upon the nerve center, and set in play forces which have acted to produce degenerative changes there—whichever of these hypotheses be the true one, it seems to me that the conclusion is unavoidable that the lesion of the nerve trunk can not account for the symptoms of the disease, and that the central origin of the affection must be accepted as the true explanation. Additional evidence in favor of the central origin of the disease is found in the obscure brain symptoms which attended a number of the cases reported, which would seem to point to the existence of some central lesion involving other parts than those which preside over this respiratory function of the glottis.

Mackenzie,* in his later work, seems to have abandoned the theory formerly entertained by him as to the central origin of the disease, and leans rather to the view that the source of the affection is in the muscles themselves. Probably this is partially true in those cases in which we find localized infiltration from neighboring tubercular or syphilitic disease; but in those cases cited, in which, as the result of blood poisoning, the affection advanced slowly but surely to an untoward result, it would seem that there must be some further explanation than the localized morbid process.

If the disease were a local one in the muscles themselves, we should certainly notice in some cases that the paralysis invaded one muscle to its destruction, while its fellow remained intact. This, however, rarely, if ever, happens, for the clinical history of the recurrent spasmodic dyspnœa would show that both muscles were involved from the outset. And certainly, when they come under inspection, it is an extremely rare event to notice any difference in the motility of the two sides. Indeed, I do not think this has ever been observed in a case which was a true bilateral paralysis of the abductors, and not a secondary infiltration of the muscles.

---

* "Diseases of the Throat and Nose," London, 1880.

As regards the treatment of these cases, what has been said in the course of the paper is sufficient to make the prominent indications plain. Those cases in which the disease is recognized early in its course, and which are traceable to a specific taint, can be cured by medication. Those cases in which the symptoms have persisted for six months or more will eventually demand tracheotomy by the exigencies of the dyspnœa—and the tube will need to be worn during life.

I think that another and most important conclusion may be drawn. If the tracheotomy has been deferred too long, the weary and struggling muscle will have so far lost its vitality that any hope of its recovering its contractility will have been destroyed; whereas, had the disease been recognized early and the trachea opened, thereby setting at rest the respiratory movement in the larynx, would there not be a much better hope that its integrity might be restored? By this, of course, I do not mean absolute and entire rest, for in such a case I should consider it of the utmost importance that the larynx should be subjected to daily use, of a moderate character, in talking and breathing occasionally with the mouth of the tube closed.

In a case, therefore, in which we recognize the condition early, and in which improvement is not accomplished as the result of treatment, I think the advisability of an early tracheotomy can not be questioned. This, I think, is shown in every case which I have related in which the tube became a permanent need, and also in every case in which the operation was done early in the disease, as, in these latter cases, with one exception, the result was a permanent cure, while in the former cases the operation was done only after the muscles had undergone complete atrophy. The operation is a very simple one, and unattended with any immediate danger. The untoward sequelæ which are liable to occur may be prevented by proper precautions. A delay is constantly endangering the integrity of the muscle, and too great a delay will surely render the operation imperative, but then only to be followed by the terrible necessity of wearing a trachea tube during life.

Among the cases detailed, I have given one in which the paralysis was due to epithelioma, and another in which it was an accompaniment of laryngeal phthisis. Of course, these two cases are not to be classified under the same category with those in which the paralysis is primary. The cases are given as illustrative of the manner in which the disease may occur as a secondary affection, and as a complication of laryngeal cancer, phthisis, or syphilis. These cases also illustrate the position which the part will assume when the muscular control which normally belongs to it is abolished. It falls under the control of the opposing muscle, and assumes the position in which it would be placed by a full contraction of that muscle.

ON CLIMATE IN THE PREVENTION AND CURE OF PULMONARY CONSUMPTION, WITH SPECIAL REFERENCE TO THE PENINSULA OF FLORIDA.

By C. J. KENWORTHY, M. D., Jacksonville, Florida,
PRESIDENT OF THE FLORIDA MEDICAL ASSOCIATION, AND OF THE DUVAL COUNTY MEDICAL SOCIETY; LATE SENIOR SURGEON TO THE BALLARAT HOSPITAL, AND PHYSICIAN TO THE BALLARAT BENEVOLENT ASYLUM, BALLARAT, AUSTRALIA.

(Concluded from October Number.)

In considering temperature as a climatic factor, writers overlook the fact that in the north temperate zone the days are longer and the nights shorter; consequently the rays of heat from the sun are longer concentrated on the earth's surface, with a proportionately shorter night for cooling by radiation. In the southern portion of the peninsula the thermometer does not rise so high as in the Northern and Western States. To illustrate this fact, I have compiled a table showing the number of days the thermometer reached 90° and above, in different months and years, at Punta Rassa, and the maximum temperature recorded:

YEARS.	Number of days on which the maximum temperature was 90° F., or above.				Maximum temperature reached during the year.
	June.	July.	August.	September.	
1874........	6	1	6	1	91°
1875........	..	8	3	..	91°
1876........	5	8	10	..	92°
1877........	11	16	9	10	93°
1878........	3	8	12	3	92°

The night temperature at Punta Rassa is very low, varying from 70° to 78° during the summer months. On but one occasion during the period referred to did the minimum thermometer mark 82°. With a comparatively low range of thermometer, and a mean relative humidity of 73 per cent., even southern Florida can not be called "hot and humid."

Dr. Jones asserts that Florida is "hot," and by this expression his readers are led to believe that Minnesota is cool during the summer. To illustrate the meteorology of St. Paul, he introduces tables for the year 1878, and for purposes of comparison we shall use data for this State for the same year:

MAXIMUM TEMPERATURES FOR THE HOT MONTHS FOR THE YEAR 1878.

STATIONS.	June.	July.	August.	September.	Mean.	
St. Paul, Minn..........	87°	96°	94°	94°	92·7°	
Punta Rassa, Fla.......	92°	91°	92°	90°	90·1°	93°
Key West, "	94°	93°	94°	92°	93·2°	
Jacksonville, "	96°	97°	98·5°	92°	95·9°	

From these figures it will be seen that the mean for Punta Rassa was 2·6° below that for St. Paul, and that the mean of three stations in this State exceeded that of St. Paul by three tenths of one degree.

The popular opinion that the State possesses a "humid" climate is probably based on a statement of Professor Loomis ("Meteorology," p. 60), that "Near great bodies of water, the atmosphere generally contains more moisture than it does over the interior of continents." As the peninsula is surrounded by water on two sides, writers have taken it for granted that the atmosphere was moist, without investigating the subject. Dr. Denison says: "Of American climates of low elevation, we have moist and sedative Florida."* Dr. Napheys uses the following language: "Lower damp climates—Florida, moist and changeable."† At p. 298, Dr. Jones asserts that, "The atmosphere of that State [Florida] is loaded with moisture." By such statements Florida is injured and misrepresented. Atmospheric humidity is one of the most important climatic factors in the treament of pulmonary diseases, and, if the humidity of this State is as represented by the authorities quoted, peninsular Florida is an unsuitable place for invalids, and should be shunned by them as they would shun the knife of the assassin. Mentone, on the Mediterranean, possesses a European as well as an American reputation for its climate, and one great argument advanced for its superiority is its low mean relative humidity; and we will admit that Minnesota is remarkable for its dryness. We shall offer no opinion regarding the humidity of this State, but copy tables kindly furnished us by the Chief Signal Officer of the U. S. Army. The mean relative humidity of the cold months for a period of *five years* for American stations, and for Mentone for three years, is as follows:

STATIONS.	Number of years.	November.	December.	January.	February.	March.	Mean for 5 months.	Mean for 5 months for States.
		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Mentone, Mediterr'n‡	3	71·8	74·2	72·0	70·7	73·7	72·4	
Breckenridge, Minn..	5	76·9	83·2	76·8	81·8	79·5	79·6	74·3
Duluth, Minn.......	5	76·0	72·1	72·7	73·3	71·0	72·6	
St. Paul, "	5	70·3	73·5	75·2	70·7	67·1	71·3	
Jacksonville, Fla....	5	71·9	69·3	70·2	68·5	63·9	68·8	72·7
Key West, "	5	77·1	78·7	78·9	77·2	72·2	76·8	
Punta Rassa, "	5	72·7	73·2	74·2	73·7	69·9	72·7	

From these data it is evident that the mean relative humidity of Mentone exceeds that of Jacksonville by 3·6 per cent., and that the mean of peninsular Florida is less than that of Minnesota by 1·6 per cent.; we find 5·6 per cent. in favor of Jacksonville over Minnesota, and 2·5 per cent. in favor of this city over St. Paul. One fact in connection with the humidity of this city is the very low mean for the dreaded month of March, 63·9, when it is 67·1 at St. Paul and 73·7 at Mentone. If these figures are reliable, Florida *is not so humid as has been represented.* If we take the entire year, for a period of five years, we shall find but little difference between the humidity of Minnesota and that of Florida:

---

* "Rocky Mountain Resorts." By C. Denison, M. D., 1880. P. 13.

† "Modern Medical Therapeutics." By G. H. Napheys, M. D., 1880. P. 193.

‡ "The Riviera." By E. J. Sparks, M. D. London, 1879. P. 193.

YEARS.	MINNESOTA.			FLORIDA.		
	Breckenridge.	Duluth.	St. Paul.	Jacksonville.	Punta Rassa.	Key West.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1875	75·7	67·2	69·0	70·3	76·0	71·5
1876	67·7	68·2	69·1	67·2	73·0	76·1
1877	72·2	71·9	67·6	69·3	70·5	74.1
1878	76·2	71·5	67·7	68·7	72·4	74.5
1879	74·1	72·8	65·3	69·7	72·3	74.2
Mean for station for 5 years	78·2	70·3	67·3	69·0	73·0	74·1
Mean for 5 years for States	70·4			72·0		

From these reliable data it will be discovered that "humid" peninsular Florida for the entire year, with its "atmosphere loaded with moisture," possesses a mean relative humidity of but 1·6 per cent. above that of "dry" Minnesota; and that the percentage of Jacksonville is but 1·7 in excess of that of St. Paul. If Dr. Jones's position regarding the "humid" atmosphere of Florida is correct, and if data furnished by the Chief of the Signal Service of the U. S. Army are reliable, the air of Minnesota is humid, and in consequence unsuitable (comparatively) for the treatment of pulmonary diseases. If "hygrometric measurements" show that the atmosphere of Florida is "loaded with moisture," a difference of one and six tenths per cent. will not make Minnesota "dry."

Dr. Jones's statement regarding persons' "energies being paralyzed, and exercise consequently neglected," is not supported by authority or by the views expressed by residents of this State. I have visited a large portion of the State in summer and in winter, and I am forced to express an opposite opinion. But, as my opinion is merely that of an individual, and of but little value, I included in my circular letter the following query, and will quote the replies:

Query.—"Do you consider the climate of this State, from October to May, bracing and invigorating, or enervating and depressing?" *Answers.*—"Bracing." "Bracing and invigorating." "Bracing and invigorating." "Dry and stimulating." "Bracing." "Bracing and invigorating." "Bracing and invigorating." "Invigorating and bracing." "Bracing, and not relaxing and depressing." "Bracing and invigorating." "Invigorating and bracing." "Bracing, invigorating, and delightful." "From November to May this climate exerts a tonic influence on invalids." "Climate from October to May quite invigorating." "Decidedly bracing and invigorating." "Bracing." "Bracing and invigorating."

If the opinions of the leading physicians of the State are to be received as authoritative, Dr. Jones has been misinformed with regard to the action of this climate on invalids. It is possible that I may be criticised for referring to the climate merely during the cold months; but this is the period which interests invalids. I am engaged in collecting data and information regarding the action of this climate upon invalids who have resided in this State from one to forty years, and at some future time will publish results, be they favorable or unfavorable to the State.

At p. 280, Dr. Jones refers to the injurious effects of the gaseous "products of decomposition" and of "microscopic germs floating in the atmosphere," coupled with the statement that "these deleterious organic substances, which are constantly inhaled in the lower strata of the atmosphere, are one of the strongest arguments against sending patients to Florida." Here is another unfavorable reference to Florida, and one not appropriate to a "plea for cold climates." Florida has not been visited by Professor Tyndall, or Sparks, or Angus Smith, and, as Dr. Jones has not subjected the atmosphere of this State to chemical analysis or microscopic examination, it is pertinent to inquire by what evidence the writer has ascertained that the air is contaminated by "gaseous products" and "germs." It is admitted by all scientists that the air of the ocean is purer than that of the land. As the prevailing winds in this State for nine months are easterly, and for the three other months from the southwest, and as the peninsula of Florida is surrounded on two sides by the sea, and daily fanned by sea breezes, we are at a loss to determine the source of these atmospheric contaminations. At times, during the winter months, we are favored with westerly and northerly winds, and at such times the air of the State may be rendered insalubrious by exhalations and germs wafted from States to the north and west of this. Until Dr. Jones can establish the fact that the air of the Gulf and Atlantic is charged with the deleterious substances referred to, we can not admit the correctness of his statement regarding the injudiciousness of sending patients to Florida. Correctly speaking, the air (in relation to the surface of the earth) that surrounds St. Paul is as low as that of Jacksonville. If St. Paul were elevated on a mountain several thousand feet high, the Doctor's argument would have some weight.

Dr. Jones states that the "mean altitude of Florida is fifty-seven feet above the sea," and, in consequence, "the effects of the deleterious substances which are constantly inhaled are pernicious." This sentence is very vague, for it does not even refer to what particular "substances are inhaled." The question arises, What is the writer's authority for the mean altitude of this State? At p. 285, he gives what purports to be an authoritative list of twenty-one States, with their altitudes, but Florida is not included. But three lines of levels have been run across the State, and, as they were run to find a feasible route for a trans-peninsular canal, the lowest routes were selected, and from these lines no definite opinion could be formed of the "mean altitude" of the State. On one route the summit was 238 feet, on another 204 feet, and General Gillmore's recent survey *via* Okefenokee Swamp, gave an altitude much over 100 feet for nearly the entire distance. Away from the coast and the valley of the

St. John's the country is rolling and hilly, ranging from 75 to 425 feet above the ocean level. Visitors and writers have mainly confined their observations to the valley of the St. John's, and, as a consequence, the State has been misrepresented. The mean altitude of a State may be low, and yet it may contain elevated localities.

The writer refers to the "favorable effects of the inhalation of ozone to consumptives," and remarks that the absence of this form of oxygen in situations of but slight elevation above the sea "should discourage physicians from sending patients to such resorts." Although there is no distinct reference to this State, this passage implies that the atmosphere of Florida is deficient in ozone, and in consequence should be shunned by invalids. On p. 281, he states that the "air of the sea is richer in this variety of oxygen than the atmosphere of the plains." Moffat affirms that the amount is increased with temperature. Dr. Schreiber, of Vienna, asserts that the turpentine exhaled by pine forests possesses to a greater degree than all other substances the property of converting the oxygen of the air into ozone. These references go to prove that the air of Florida is charged with ozone. But the presence or absence of ozone in the air of this State is entirely hypothetical, for no observations have been made.

At p. 283, Dr. Jones asks the question: "Why is consumption so frequent in Florida?" and, at p. 289, answers the question by stating: "It is not surprising that Florida should suffer from this scourge when we remember that it is a peninsula, and therefore exposed on two sides to this oceanic influence." He also says: "It need scarcely be repeated that this marine atmosphere is a fruitful source of mischief to consumptives, as indicated by the high *death-rate of those residing in situations where this influence is operative.*" To establish his theory of the infrequency of phthisis in cold climates, he specially refers to Nova Scotia, Norway, Sweden, and Iceland. Nova Scotia is a peninsula, and surrounded by water to a greater extent than Florida. Norway and Sweden constitute a peninsula, and Iceland is an island. If the writer's theory is correct, that "oceanic influence" is productive of phthisis, the places referred to "*should suffer from this scourge.*" In my opinion, the infrequency of phthisis in this State and the favorable effects of the climate are attributable to a great extent to its exposure to "oceanic influences." The "frequency of phthisis in Florida" *has not been established.* The profession in this State (and they are the best judges) are a unit with regard to its *infrequency.* This State has no State Board of Health, and no registration of deaths outside of the city of Jacksonville; hence assertions coming from strangers, regarding the diseases and mortality of the State, must be based on insufficient evidence.

The writer is at fault even with regard to the geography of the State which he denounces. He states that it is exposed on two sides to "oceanic influences." This State has a peninsular portion "exposed on two sides to the ocean," and a portion 297 miles long that is not peninsular, and not so exposed. And, if Army Reports are to be believed, the disease is more prevalent in the non-peninsular than in the peninsular portion. But, to illustrate the frequency of consumption at one point, where data of the most reliable character can be obtained—where a body can not be buried without a physician's certificate, I shall refer to the city of Jacksonville. The temperature of this city during the summer months is as high as, if not higher than, in most portions of the State. Owing to the population of the place, the mode of living, and the habits of at least one third of the population, consumption should be more frequent here than in any other portion of the State. To illustrate the mortality of this city, I addressed our efficient and intelligent Health Officer, Dr. Knight, and received the following reply:

HEALTH DEPARTMENT, CITY OF JACKSONVILLE.
April 10, 1880.

DR. C. J. KENWORTHY:

DEAR SIR: A careful examination of the Mortuary Reports in the City Sexton's office reveals the following facts. Previous to 1878 the records were imperfectly kept, and are unreliable.

Mortality for 1878	119
Mortality for 1879	171
Mortality for two years	290

Deduct from this the number of visitors who died of phthisis, Bright's disease, and chronic disease of the heart	40
Proportion of mortality among residents, for two years, per 1,000	12·5
Proportion of deaths from phthisis among residents, per 1,000	0·55
Percentage of deaths from pulmonary diseases other than phthisis	1·4

Respectfully yours,

A. W. Knight, M. D., *Health Officer.*

From Dr. Knight's published semi-annual report of the mortality of this city for the first six months of this year, we find:

Proportion of entire mortality, per 1,000	10·6
Deduct from entire mortality 37 deaths of non-residents, 33 of whom died of phthisis, and 4 of heart disease; the death rate properly belonging to this city is	6·9
Mortality from phthisis, per 1,000	·0

During the years 1878 and 1879 the mortality from phthisis among residents was very light—a fraction over one half of 1 per 1,000; and for the first six months of 1880 not a death among residents from this disease. These figures do not substantiate Dr. Jones's statements regarding the mortality from phthisis in this State, more especially among old families that have "resided in the State for generations." I am disposed to throw the mantle of charity over the Doctor's statements, and express it as my opinion that he has been misled by others, and that he neglected to receive their statements *cum grano salis.*

To test Dr. Jones's statements regarding the mortality of Florida, I have had a compilation made of the Census Returns, and find that the mortality per 1,000 for the census year was as follows:

Mortality per 1,000 from all causes was	10·7
Mortality from consumption per 1,000 was	0·60
Mortality per 1,000 from consumption, after deducting deaths of invalids who came to this State in the last and incurable stage of this disease, was	0·44
Mortality per 1,000 from pulmonary diseases other than consumption was	0·50
Ratio of deaths from consumption to all deaths, including those of invalid visitors	1 to 15·2
Ratio of deaths from consumption to all deaths among residents	1 to 18·2

The census returns tend to negative the statement of Dr.

Jones, and go to prove that consumption is very infrequent in this State. And, if the disease occurs so seldom, we may argue that the climate of Florida is eminently adapted to the cure or alleviation of this affection.

If we take into consideration the fact that, as a general rule, those who settle in the Western and Northwestern States are "the bone and sinew of the land," and, on the contrary, that a large number of persons who settle in this State come here as invalids, the low rate of mortality is remarkable.

When discussing the mortality of this State, it must be remembered that a large number of the residents are very poor, and have uncomfortable homes. They live upon improper, and, in great measure, insufficient food. They are poorly clad, and are exposed to the elements. Many of them reside beyond the reach of physicians; and in many instances physicians are not summoned to attend the sick until it is too late to save life. In the cities and towns, and even in the country, a large number of the poorer classes indulge in alcoholic liquors; and that dire disease, syphilis, in its various forms, annually claims many victims. In our County Hospital, under my superintendence, I have remarked that syphilis is a frequent source of phthisis in the colored race. Taking all the facts into consideration, I am only surprised that the mortality is not 40 per 1,000 instead of 10·8. The State must be a salubrious one, or the mortality would be greater.

At p. 290, Dr. Jones says: "The whole number of days during our winters, the extreme cold of which prevents invalids being out of doors, are fewer in number than are the rainy days during a corresponding period of time in Florida." Referring to the Signal Service Reports, we find that in St. Paul, for the five cold months, for five years the minimum temperature was 10° and below on an average of fifty-seven days in each year. In such a low temperature I am of the opinion that patients suffering from pulmonary diseases can not safely take out-door exercise, but must of necessity remain in artificially heated rooms. But if rainy days are injurious, and prevent the taking of exercise in Florida, can rainy and snowy and sleety days be beneficial in Minnesota? To determine the question of rainy days, we shall quote from Dr. Jones's table on p. 287, and give data furnished by the observer in charge of the signal station in this city, for the cold months for five years:

STATIONS.	Number of years.	November.	December.	January.	February.	March.	Rainy days, meaning any day when rain or snow fell.
St. Paul.........	1	4	13	8	6	11	42
Jacksonville.....	5	8·6	7·4	7	8·6	5·8	37·4

In Florida, winter is the dry season and rains are infrequent, and in the southern portion of the State they seldom occur. Owing to the character of the soil, within a few minutes after rain has ceased falling the invalid can walk out without incurring the risk of wetting the soles of his shoes. In this State, we have no mud, slush, sleet, or snow. Sunshine is an important factor in the treatment of disease, and, as an evidence that this State is favored with sunshine and fair weather, and not "cloudy, foggy weather," as has been asserted, I give the following data for five years, for the cold months, the period interesting to invalids:

METEOROLOGICAL DATA FROM U. S. A. SIGNAL OFFICE, JACKSONVILLE, FLORIDA.

DATE.	RAINY DAYS.					REMARKS.
	Nov.	Dec.	Jan.	Feb.	March.	
1874–1875	14	6	15	10	5	"Rainy days," all days on which rain fell.
1875–1876	10	4	4	8	7	
1876–1877	5	10	6	6	6	
1877–1878	9	9	5	10	8	
1878 1879	5	8	5	9	8	
Average.	8·6	7·4	7	8·6	5·8	37·4 days in 5 months.
	CLOUDY DAYS.					
	Nov.	Dec.	Jan.	Feb.	March.	
1874–1875	4	6	12	3	8	
1875–1876	8	4	5	7	2	
1876–1877	6	3	2	10	7	
1877–1878	10	11	11	9	10	
1878–1879	9	11	5	11	4	
Average.	7·4	7	7	8	6·2	35·6 cloudy days in 5 m's.

J. W. Smith, Observer in Charge.

At p. 296, Dr. Jones says: "It is difficult to understand the reason why the profession in this country still persist in sending their patients to Florida. That improvement should take place in that State is against reason and experience alike."

In order that the "reason" may be understood why patients are sent to this State, I will quote the language of Dr. H. A. Johnson, of Chicago. "I had," says the Doctor, "about fifty patients last winter in Florida and southern Georgia, and they came back better. Even those in whose lungs cavities existed were better than though they had staid in Illinois. I will therefore advise patients in the latter stages to go to Florida."

I have critically examined Dr. Jones's essay, and I can not discover any valid "reason" why he should be so denunciatory in his remarks regarding this State. The word "experience" is certainly not a proper one for him to use, for he has not visited this State, and he does not sustain his assertions by the evidence of those who have had "experience" in it. It is to be deplored that gentlemen can not discuss the climate of a particular section without indulging in pointed references to this State or any other sanitarium. The profession require facts, and they should be published, and medical men allowed to form their own conclusions. There are medical men in the Northern and Western States who believe that Florida possesses a good climate for the treatment of pulmonary diseases, and they are as much entitled to their opinion as Dr. Jones; and I am of the opinion that he has no right to hold them up to public censure because they express their honest convictions. I dislike to be censorious; but the writer's statement savors of dogmatism. Dr. Jones must admit that leading authorities advocate a dry, bracing, temperate climate for the treatment of a majority of cases of phthisis, and this is the "reason" why many medical men send their patients to Florida. I have visited many portions of this State, and have met many persons who came to it suffering from pulmonary diseases, many of whom have been permanent residents from ten to forty years; and in my capacity as a physician I have witnessed the beneficial effects of this climate, and can speak from "reason and experience"; and must express it as my opinion that Dr. Jones has been deceived by others.

At p. 296, he says: "The climate of Florida is miserable; it is hot and damp." Webster's definition of "miserable" is, "very poor, worthless, abject, mean, despicable." From "reason and experience alike," I maintain that the word "miserable" does not apply to this State, and that the use of such a term in this connection is uncalled for—calculated to injure a State—a mere assertion unsustained by facts or "experience" of physicians competent to form intelligent opinions. I have established by reliable data that the humidity of peninsular Florida during the cold months is less than that of Minnesota, and, if the former is too humid, what is to become of the latter as a climatic resort? It is evidently not too "hot" in winter, and during the summer many portions of Florida will compare favorably with Minnesota. I regret that Dr. Jones's assertions compel me to refer to Minnesota. I simply allude to the State for the purpose of comparison, and not to injure it climatically. If it can be satisfactorily established that Minnesota is the ideal climate for the treatment of pulmonary diseases in summer and winter, I will be the first to advocate its claims.

To cast censure on warm climates, at p. 297, he states that "Dr. T. K. Chambers informs us that they send their phthisical patients of England to the cold, bracing air of northern Scotland." But he neglects to add that they send them there for a summer climate. "From July to the end of October" (Tanner), "To leave Scotland in September" (Smith). Scotland is recommended as a summer residence for consumptives, because of its moderate temperature during that season, it being 58·6°, closely approaching that of Jacksonville during the cold months, which is 58·7°. Smith, of the Brompton Hospital, London, recommends Scarborough, "the queen of watering-places," as a summer residence for consumptives. And the mean for the summer, for six years, was 56·6°.

Having in previous pages condemned Florida because its "mean altitude is only 57 feet," on p. 283 Dr. Jones asserts that "altitude is inimical to the production of consumption."

But I conceive that dryness of the atmosphere and soil, pure air, and other factors, exert as much influence as, if not more than, mere altitude. The difficulty that surrounds altitude is, that each writer insists that his locality possesses the proper elevation. One writer advises 700 feet, another 1,200, another 1,800, and another from 5,000 to 8,000 feet; and the question arises, whom we are to accept as authority. The advocates of high altitudes refer to the immunity from phthisis of residents in the mountainous regions of Switzerland; but they have overlooked, or failed to quote, the interesting and instructive statistics contained in the work of Dr. Emil Müller, of Wintesthur.

Dr. Jones states that the "streams" of Florida "are sluggish." With regard to the noble St. John's, and some of its tributaries, I admit the soft impeachment. Nearly all the rivers (and they are numerous) in the central, southern, and western portions of the State are the opposite of what he asserts.

He informs us that the "atmosphere of many localities is filled with malaria." From his unqualified remark, persons will be led to believe that malarial diseases are common at all seasons in this State. In this connection, I can not do better than quote the language of Surgeon-General Lawson, of the United States Army: "As respects *health*, the climate of Florida stands preëminent. That the peninsular climate of Florida is much more salubrious than that of any other State in the Union is clearly established by the medical statistics of the army. Indeed, the statistics in this bureau demonstrate the fact that the diseases which result from malaria are of a much milder type in the peninsula of Florida than in any other State in the Union. These records show that the ratio of deaths to the number of cases of remittent fever has been much less than among the troops serving in any other portion of the United States. In the Middle Division of the United States the proportion is one death to thirty-six cases of remittent fever; in the Northern Division, one to fifty-two; in the Southern Division, one to fifty-four; in Texas, one to seventy-eight; in California, one to one hundred and twenty-two; in New Mexico, one to one hundred and forty-eight; while in

Florida it is but *one to two hundred and eighty-seven.* In short, it may be asserted, without fear of refutation, that Florida possesses a much more agreeable and salubrious climate than any other State or Territory in the Union."

Dr. Byrne, late surgeon in the United States Army, and long a resident of Florida, says: "It would seem paradoxical that the malarial diseases of East Florida (abounding as it does in rich hammock lands, and exposed to a tropical sun) should generally be of a much milder form than those which prevail in more northern latitudes. That such, however, is the fact there can be no doubt, for this fact is proved by an aggregate of evidence (extending over more than twenty years) which it is impossible to resist. It is suggested, in explanation of this fact, that the luxuriant vegetation, which in the Southern and Middle States passes through all the stages of decomposition, is, in East Florida, generally dried up before it reaches the putrefactive stage of fermentation, and that, consequently, the quantity of malaria generated is much less than in climates more favorable to decomposition. This view is strengthened by the facts that the soil of Florida is almost everywhere of so porous and absorbent a character that moisture is seldom long retained on its surface; that its atmosphere is in constant motion; and that there is more clear sunshine than in the more northern States. It is further suggested that the uniform prevalence of sea-breezes and the constant motion of the atmosphere in the peninsula tend so much to diffuse and attenuate whatever poison is generated, that it will generally produce but the mildest form of malarial disease, such as intermittent fever."

I admit that, in summer and autumn, in some localities malarial diseases exist; but there is no reason why the invalid should visit these localities. There are but few States east of the Rocky Mountains where malarial diseases do not occur. In fact, malaria is the bane of certain localities in many States. To illustrate the fact that malarial diseases are not of frequent occurrence during the cold months in this section, I have examined the records of the county hospital under my superintendence, and find that the following cases of malarial diseases were admitted for the five cold months of 1879 and 1880:

Diseases.	November.	December.	January.	February.	March.
Intermittent Fever..........	1	0	0	0	0
Remittent "	1	0	0	0	0
Congestive "	0	0	0	0	0
Typho-Malarial "	0	0	0	0	0

I have seen and treated malarial diseases in the North and in the South, and in other lands, and I must express it as my opinion that these diseases are of a milder type and more amenable to treatment here than in other States.

On p. 296 we have a reference to the advisability of preventing tubercles from softening and breaking down; and in this connection we are furnished with another unfavorable reference to "the climate of Florida, which is moist and warm," and "must certainly have the effect of breaking down this tuberculous matter. This moist, warm climate of Florida must act as an internal poultice, softening the morbid mass, and thereby hastening the fatal end." As the air of Florida is drier during the winter months than that of Minnesota, that climate must act in a similar manner; or perhaps the writer refers merely to the "hot" months, when the mean relative humidity of Florida exceeds that of dry Minnesota by 1·7 per cent. Before the Doctor's pathological doctrines will apply, he must establish the fact that Florida is "hot and humid." It is somewhat surprising how frequently the words "hot" and "humid" occur in the paper, as applied to this State.

Dr. Jones unhesitatingly asserts that the climate of Minnesota is beneficial only in the first stage of consumption; and, as he condemns southern California, Colorado, Florida, the West Indies, and the resorts of the Mediterranean, there is nothing left for the invalid when tubercles have softened but to give up all hope and "set his house in order."

"It should be a matter of congratulation," remarks Dr. Jones, "that the medical profession of this country are beginning to study the question of climatology in an enlightened and rational manner of late." If it is a "rational manner" to condemn climates by mere assertions, and to refer to climates censoriously, as he has done to that of this State, we can not "confidently look forward to the time when the effect of climate upon consumptives will be a thoroughly worked-out problem." The only legitimate mode to "work out the problem" is for writers to keep up with the age, eschew the use of imperfect statistics dating back from three to five decades; to use authoritative statistics and facts of *to-day;* to abandon preconceived opinions, suppositions, and assertions; to confine themselves to ascertained facts; to carefully examine each climatic factor; and to secure the views of a number of experienced, intelligent, and reliable medical men living and practicing in any particular climate or place, regarding the frequency and fatality of any given disease, and from accurate mortuary reports determine the mortality of any given disease, in any particular sanitarium, section, or State. I have received from an unknown source a pamphlet from the pen of Dr. Staples, of Minnesota, descriptive of the climate of that State, and, to his honor be it said, it does not contain an unfavorable remark regarding other States or climates. It is a logical, honest essay on the climatology of that State, and an honor to the author.

I have referred merely to a few of the salient points of Dr. Jones's paper, and regret that space forbids a notice *seriatim* and *in extenso.* In closing, I can not resist the temptation of quoting the language of Dr. Byrne, an army surgeon, who served in Florida—more especially as his opinions are mine, and the opposite of those of Dr. Jones, of St. Paul, Minnesota: "The winters are delightful, five days out of six being bright and cloudless, and of the most agreeable temperature. In the southern portion of the peninsula frost is never felt. The winter resembles very much that season which, in the Middle States, is called Indian summer, except that the sky is perfectly clear, and the atmosphere dry and elastic. Rain falls but rarely during the winter months; three, four, and not unfrequently five months of bright, clear, cloudless days occur continually. This is one of the greatest charms of the winter climate in Florida. Contrary to what might be expected, the summer weather of East Florida is much more agreeable, and its heat less oppressive, than that which is experienced in the Middle States. This is owing to its being fanned by the breezes of the Atlantic on the east and those of the Gulf of Mexico on the west, both of which can be distinctly felt in the center of the State. Besides this, the northeast trade winds play over the whole peninsula. The summer nights are invariably cool, and even the hottest days are seldom oppressive in the shade. In the summer season the mercury rises higher in every part of the United States than it does along the coast of Florida. Frequent showers occur during the months of March, April, May, and June, and about the first of July what is termed the rainy season commences, and continues till about the middle of September. Although it rains about every day during this season, it seldom rains all day. These rains fall in heavy showers, accompanied by thunder and lightning, and seldom last more than four hours. Indeed, they do not average more than one hour a day. They generally commence about one o'clock P. M., and are always over before five o'clock P. M., leaving for the remainder of the day a cloudless sky and a delightfully cool atmosphere."

AN IMPROVED OPERATION FOR A NEW PUPIL AFTER CATARACT OPERATIONS.

By EDWARD G. LORING, M. D.,
NEW YORK.

WHEN, after an operation for cataract, the pupillary space becomes closed through inflammatory processes, it becomes necessary to open this by what is known as a secondary operation, but which is often, if not usually, a more serious undertaking than the original operation; how serious, indeed, is shown by the repeated operations which become necessary, in order to establish an opening and to counterbalance the ever-recurring and almost irresistible tendency to a subsequent closure—operations which, from their very frequency and inherent violence, often lead to a total loss of the eye.

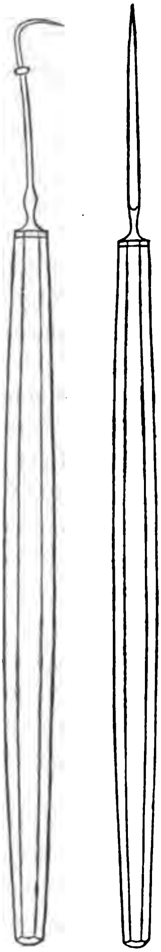
The means by which these openings through the denser membranes are usually made consist either in a simple iridectomy or in this combined with the excision of the iris *in situ* by means of scissors, as, for example, those of Wecker. But both of these methods are open to grave objections, which are only too apt to defeat the object of the surgeon and to cause the operation to fail even where success seemed to be most apparent. For, even with a simple iridectomy, a large external wound must be made in order to give sufficient play to the arms of the forceps, as one of the chief, if not the chief, reason why a failure to grasp the iris takes place is because the opening-wound is too small. This necessity of making the external wound of sufficient size is, however, in itself a source of great danger, no matter how smoothly the operation may have passed off, for the inflammatory reaction which accompanies the closure of the wound is apt to propagate itself to the iris, already the subject of inflammatory processes, and a new attack is lighted up, to be followed by even a firmer closure of the pupil than before. Thus the apprehensions arising from the external wound alone are neither light nor to be disregarded, but, when to these are added the difficulties in seizing the iris, the tension required to draw this through the wound, the great danger of rupturing the hyaloid, the loss of vitreous, and the occurrence of the deeper-seated and oftentimes violent hæmorrhages, we have one of the most difficult and harassing positions in which the ophthalmic surgeon can be placed.

Nor is this all, for it often happens that this secondary operation for iridectomy passes off with perfect success. A large piece of the iris is excised, and the pupillary space presents a uniform and promising blackness. Moreover, the convalescence is perfect and unretarded, while the eye, when the bandages are removed, presents a very favorable aspect; but, unfortunately, to the grief of the patient and the surprise and mortification of the surgeon, vision is no better than before the operation, and a thorough examination now reveals the fact that the iris has come away, leaving behind it a thickened and deep-seated membrane covered with uveal pigment, which, surgically speaking, is harder to deal with than before the iris was removed.

Nothing remains to be done under these circumstances but a needling operation, which, from the widely extending ramifications of the membrane and its connections with the ciliary body and hyaloid membrane, is both difficult and dangerous. It is to avoid these numerous and, as a usual thing, inefficient operations, that it has been proposed to attack these membranes from the beginning with scissors, with the hope of excising a piece of sufficient size to insure a permanent opening. This proceeding, to which are added, besides the dangers of simple iridectomy, the almost unavoidable loss of a large quantity of vitreous, is so grave in its nature, and so disastrous in its results, as to be, in the writer's opinion, seldom or never justifiable, especially as a much simpler and more efficacious method can be adopted.

This consists, in the writer's opinion, in the transverse division of the iris and all underlying membranes—a modification, in fact, of the operation of iridotomy. This operation is at the present time but seldom performed, as the cases to which it is adapted are supposed to be of rare occurrence, and from the fact that even in these cases it rarely results in success. This want of success, however, is due, I think, not so much to the kind of operation, as to the manner in which it is performed. For the knife is entered commonly somewhere in the arch of the clear cornea, nearly perpendicular to the plane of the iris, and consequently at a small angle with the position of the opening to be made in its surface. From this it results that either the edge of the pupil is simply depressed before the knife, or, if a perforation is made, it is very small, and, from its position in the center of a tense but inelastic membrane, is apt to close again almost immediately after the operation.

The substitute for this operation which I now propose consists, not in a simple opening in the center of the iris, but in a large, free, and transverse section of the iris and all underlying membranes. The method of arriving at this result is as follows: Any narrow knife, such as the ordinary cataract knife of Graefe, may be used, though the narrow blade suggested by Liebreich is preferable. Better than either, however, I think, is the knife which I have had constructed for this purpose, and which is represented in the adjoining figure.



This is simply an extremely narrow knife, with a very delicate cutting edge. The reason why the knife is made so narrow is, that it may be turned on itself in the wound, at right angles, if necessary, with the position it occupied in making the puncture.

During the last year or two I have experimented with knives of various kinds and shapes, especially with those in which the blade is comparatively short, that is, from five to eight millimetres in length, with a delicate round shank; but I have a decided preference, in this method of operating, for the one described and figured here, which has a long and continuous cutting edge, for the others are apt to pierce the membranes without cutting them, when these are dense and tough, as is the rule in the cases under consideration.

The eye is fixed in the ordinary method opposite to the site of puncture. The knife is then entered, not in the clear cornea, but at the sclero-corneal junction, or just within the scleral ring, and at the middle and outer circumference, if the cut is to be horizontal, at the lower border, if vertical—as it usually is. Still, in desperate cases the horizontal section of the iris has given, in the author's hands, the best results. The puncture is, indeed, made precisely as in the operation for cataract. If the anterior chamber is deep enough, and a narrow knife is used, this is entered with the edge downward, the blade of the knife being perpendicular to the plane of the iris. The knife is then carried completely across the anterior chamber, precisely as if a counter-puncture were to be made, until the point arrives at the peripheral portion of the major circle of the iris. The section is then performed by suddenly depressing the point of the knife with a bold, free movement of the hand, until the handle of the knife, from being horizontal, assumes a vertical position. Nor should the operator be content with this movement alone, but supplement it, while the point of the knife is still deep in the vitreous, with a gentle sawing movement while the knife is being withdrawn. In this way the fibers of the iris are thoroughly divided through its entire diameter, even up to the ligamentum pectinatum, and upon this fact I think the success of the operation depends; for we know that in that rare accident, rupture of the iris from violence, the resulting opening is not a linear split, but a wide extending aperture, which has precisely the appearance as if a large and complete iridectomy had been performed, although the eyeball itself has remained intact. Moreover, the autopsy shows in these cases of rupture that the cleft extends back as far as the ciliary processes themselves, and I am of opinion that something of the same kind takes place, through the elasticity of the tissue, when the incision is made to extend to the extreme peripheral portions of the iris. Of course, the cut must not be carried so far as to involve the ciliary processes and the ciliary muscle, though little injury, I am inclined to think from my own experience, would follow even if these were invaded to a small degree.

If a very narrow knife is not used, but the ordinary Graefe knife employed instead, or the anterior chamber is very shallow, then the knife is entered as in the ordinary operation for cataract, with the flat side parallel with the iris. It is then rotated when the point arrives at its proper destination, until the cutting edge is presented fairly to the membrane. The turning of the knife wrinkles up the cornea to a certain degree, but, notwithstanding this, the rotation should be thoroughly performed. For, if the attempt is made to depress the knife on the flat, or at an angle, the resistance offered by the thickened iris may suffice to tear this latter from its attachments, or, a small rent in its surface having been made, the rest of the iris may be so folded back behind the knife as to give the impression that an opening of considerable extent has been effected, but which closes up again almost immediately by the depressed portion of the iris returning to its former position and becoming fused a second time with the surrounding tissue.

As a first result of the operation, the surgeon usually finds the tissue give way before his knife, to be followed by a rent of a jet-black appearance. Should this not occur, he may feel pretty sure that the operation is not going to be successful, which is probably due to the fact that his incision has not been bold and free enough or carried sufficiently toward the periphery at the finish.

In rare cases the new pupil may remain open, and maintain its dark appearance from the beginning, and vision be at once and permanently improved. This can only occur, however, when the bleeding is slight. As a rule, the hæmorrhage is sufficient to fill the pupillary space and so reduce the amount of vision that the operator may doubt whether any benefit has been obtained, especially as these clots are absorbed but very slowly. I have known the vision to remain unimproved for the space of two weeks, and then a gradual increase of sight to take place, followed by an admirable result. Sooner or later, a marked improvement almost invariably takes place, provided the sensation of splitting of the tissue under the knife is followed by the appearance of a black pupillary space. In those very pronounced cases where the membranes have such a density and such firm connections that there is fear of tearing the iris away from its attachments or seriously rupturing the hyaloid membrane, it is sometimes of advantage to use a second instrument to support the iris, and thus counteract the traction which the knife exerts in making the incision. A simple stop needle can be used for this purpose, and this is then passed vertically through the peripheral portion of the cornea, transfixing the iris and subjacent tissues as it passes into the vitreous.

The needle is held vertically with one hand, while the cut is made with the other. It also serves, when skillfully managed, for the fixation of the eye. As these needles have, however, no angle, it is a little difficult to hold them in such a position that the iris does not descend along their polished surface with the pressure exerted by the knife when the cut is being made. It was to avoid this difficulty that the hook represented in the figure was designed. It is, in fact, a stop needle with a curve to it. The hook is passed through the periphery of the cornea, and also through the iris and underlying membranes. The handle is then gently raised until the iris rests in the bight or angle of the hook. The hook is, of course, inserted first, but it is better not to raise the handle until the knife has been carried across the chamber, and is in a position to make the section.

What has been said hitherto has applied to those desperate cases in which the inflammation has been so violent as to have invaded the whole iris, and the inflammatory products are so great that it is not so much a question as to what kind of an opening shall be made and of what shape, as it is to get an artificial pupil at all. But there are cases in which the inflammation seems to have spared the greater part of the iris, but to have blocked up the coloboma, occasioned by the iridectomy, with a membrane too firm, both in its construction and in its connections, to be torn with needles or to be removed by traction. In these and similar cases, it would seem to be wiser to leave the membrane *in situ*, and to split the iris from the sphincter downward. The knife is then entered from below and carried upward beyond the pupillary margin, and the same depressing movement is made as has already been described, care being taken here likewise to divide the peripheral fibers of the iris by a gentle sawing movement as the knife is withdrawn.

The great advantage in this method of operating is the little violence done to the eye, since, in the first place, the external wound is so small that, as a rule, no vitreous whatever escapes, while the wound, from its very minuteness, closes at once, sometimes so quickly that the aqueous humor is reformed while the patient is still on the bed. Moreover, in the vast majority of cases, the operation is so rapid and so painless that it can be performed without an anæsthetic, and can thus be repeated when occasion requires with but little discomfort to the patient and little or no danger of inflammatory reaction. This method is very often of advantage, too, as a preliminary operation in those cases where an iridectomy would seem to be ultimately indicated, for by its means one portion of the iris can either be cut across or freed from its attachments to the surrounding tissue, so that, when the iridectomy is subsequently performed, the iris, having one free edge, can be seized by the forceps or a blunt hook, and drawn through the wound.

There is still another condition in which the operation has been of great service, that is, in capsulitis, which I am inclined to think is not recognized, especially in its early stages and in its lighter degrees, so frequently as its importance demands. The trouble usually begins with an infiltrated and thickened appearance of the posterior capsule, which is often supposed to be due to remains of the cortical substance of the lens. The iris at this time is but little implicated, and is still dilatable to a considerable degree under atropine, and may continue so even when the proliferation of cells is so great as to produce a yellow appearance within the cavity of the capsule, or a hypopyon in the lower part of the anterior chamber. Little by little the iris becomes invaded by transplantation of the inflammatory process; the interchange of fluids between the anterior and posterior chambers is interfered with, the aqueous humor becomes turbid and the eye soft; the vision sinks very much, even to mere perception of light, and the whole eye seems to be gradually melting away under a low stage of inflammation.

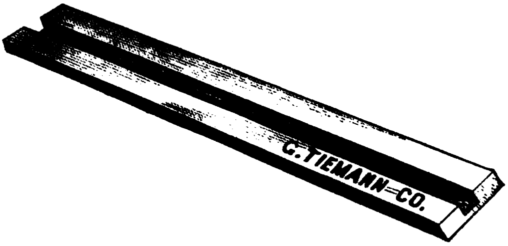
If now an iridectomy is performed, the same dangers arise from the wound, and the same difficulties are experienced in getting out a piece of the iris, that have already been mentioned. But, if, even in the later stages of the trouble, a simple but bold and free transverse division of the infiltrated capsule and the iris, or at least its sphincter, be made, the effect is always salutary and oftentimes magical.

I am therefore convinced, from my own experience, that this method of operation is one of the least dangerous and most efficient and speedy ways of making a permanent opening in just that class of cases which, as a usual thing, offer the greatest embarrassments to the surgeon.

A CONVENIENT AND RAPID METHOD OF REMOVING PLASTER OF PARIS, WHEN APPLIED IN THE FORM OF A CONTINUOUS ROLLER.

By G. WACKERHAGEN, M. D.,
BROOKLYN, N. Y.

In order to facilitate the removal of plaster-of-Paris dressing, I have recently employed a strip of soft rubber three quarters of an inch wide and one quarter of an inch thick, with a groove nearly one quarter of an inch deep, for the purpose of guiding the shears while cutting the plaster.


C. TIEMANN & CO.

To the plane surface of the grooved rubber guide (represented by the figure), the non-adhesive side of a strip of rubber adhesive plaster (Seabury & Johnson's) is fastened by means of mucilage; this prevents the guide from becoming displaced while bandaging the limb.

The fracture having been reduced, and retained in position by assistants, the adhesive surface of the rubber guide is placed along the anterior and posterior median line of the limb, which is then covered by a dry, thin bandage, to prevent the plaster from filling the groove; over this the usual plaster-of-Paris bandage is applied. This dressing may be removed easily and quickly at any time, without complaint from, or discomfort to, the patient, by cutting along the groove with the curved shears made for that purpose, an illustration of which was given in "The New York Medical Journal" for September, 1875.

After removing the dressing, the edges of the remaining lateral splints should be trimmed, the inner surfaces padded with some soft material, and the splints reapplied. To prevent the plaster from soiling the bedding, it has been my custom to varnish the splints with shellac. The necessary material for this mode of treatment can be procured from Messrs. Tiemann & Co., of New York.

BROOKLYN, 182 CLINTON STREET, *September* 21, 1880.

Editorials.

THE CLIMATIC TREATMENT OF CONSUMPTION.

THERE can be no doubt that the judicious employment of climatic, hygienic, and medicinal agencies often suffices to ward off consumption from those predisposed to the disease, or that it actually cures phthisis in not a few instances—chiefly those of the incipient stage, and those in which the element of heredity is not too marked. Much interest is now manifested in the study of the first, and probably the most important of these agencies, the influence of climate. In Europe, Davos Platz is just now exciting considerable attention; and, in this country, the claims of Florida will perhaps receive fresh consideration as the result of Dr. Kenworthy's article, the concluding portion of which is given in the present number of the "JOURNAL." Doubtless there are points that may properly be urged in behalf of each one of the more prominent places of resort for phthisical invalids. While we are not yet in a position to say with regard to any one of them that it is the place of all others to which consumptives should be sent, and while perhaps, on account of the special points to which we have alluded, we may never be able to say so without reserve, yet we seem in a fair way to arrive at a thorough knowledge of facts in regard to the climate of the various regions that are now more or less esteemed as resorts for consumptives, and to rectify and systematize our ideas as to the proper employment of climatic influences in the treatment of consumption.

There is one point in the matter, however, that does not seem to have met with the attention it deserves. There are many consumptives for whom the full benefit of climatic treatment is practically out of the question. Numbers of them can not afford the necessary expense of a prolonged residence at these places. Others hesitate to betake themselves to such distant regions, to shut themselves off, in effect, from their home associations, from all that they hold dear, and from all that interests them. To many sensitive natures a pilgrimage of this sort seems to amount to expatriation, to banishment. They shrink from it, and their friends have little heart to urge it upon them. Even the physician is apt to allow these considerations to warp his judgment and influence his advice. Meantime the disease is steadily marching on. Occasionally, we are persuaded, such a catastrophe might be prevented by a resort to regions nearer home, which, while doubtless they could not afford the patient the full benefit of climatic treatment, would yet be more cheerfully availed of. Experience at Atlantic City seems to point in this direction, and we trust that the question may be further tested by carrying out the project, which we understand has been under consideration lately, of keeping an hotel open at Rockaway Beach during the coming winter. A winter in the Adirondack region, too, might be cheerfully undertaken by many who would shrink from a sojourn at the distant resorts.

We now send sick children to seaside sanitaria in summer. To send pulmonary invalids to similar institutions, or to the mountains, during the winter, and to provide there for the maintenance and treatment of the indigent, would scarcely seem an unwarrantable draft upon the funds we devote to charity.

In the natural order of things, a quarterly report on diseases of children would appear in this number of the "Journal." We have found it necessary, however, in order to economize space, to discontinue the insertion of separate reports upon this subject. In the future, therefore, these reports will be merged with those on General Medicine. This is the less to be regretted, since the current literature of pædiatrics is somewhat meager. Much that appears in the journals specially devoted to that branch of medicine belongs quite as properly under other heads, and will, in our reports, find its place accordingly.

WE have received the first number of the "Archives de Neurologie," a handsome quarterly journal of 176 pages, edited by Dr. Bourneville (who is also the editor of "Le Progrès Médical") and Dr. H. Cl. de Boyer, under the direction of Professor Charcot, and with the collaboration of some thirty gentlemen well known in connection with current neurological literature. The first number contains an introduction by Professor Charcot; original communications by MM. Debove, Gombault, Boudet de Paris, Magnan, and Bourneville; a *revue critique* by M. de Boyer; abstracts of articles on anatomy, physiology, nervous pathology, mental pathology, and therapeutics; reviews, etc. The names we have mentioned make it superfluous for us to do more than to signify our high appreciation of the matter that these gentlemen have contributed. The articles are illustrated with several excellent wood-cuts and with four lithographic plates.

◆

Reviews and Literary Notes.

A Treatise on the Practice of Medicine, for the Use of Students and Practitioners. By ROBERTS BARTHOLOW, M. A., M. D., LL. D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College, Philadelphia. New York: D. Appleton & Co., 1880. Pp. xvi–853.

IN the preparation of this treatise Dr. Bartholow has aimed to give it the characteristics of his work on "Materia Medica and Therapeutics"—that is, "the definiteness of statement, the conciseness, and, at the same time, the fullness." For the sake of saving space, the division into chapters is dispensed with. Few references are made to

is one point
have met with
nsumptives
t is practical
not afford th
these places
distant region
me association
interests the
this sort seem
They shrink
e it upon the
considerations
e. Meantime
ually, we are
ed by a resort
they could not
atment, would
se at Atlantic C
st that the que
project, which
ely, of keeping
e coming winter
ight be cheerful
om a sojourn at
We now send
send pulmon
ountains, during
aintenance and
m an unwarra
arity.

N the nati
of chil
We
nize
pon
H

ittent, quinia is recommended in a single full dose (gr. xv–xx) ut three hours before the expected paroxysm, for these reasons: he whole effect of the quinia is obtained at the right time, a less antity suffices, and the curative effect is greater." In remittent, the edy is much more efficient if given in corresponding dose during stage of sweating.

Scrofula, acute miliary tuberculosis, rickets, lymphadenoma, rheuatism, gout, arthritis deformans, and diabetes are classed as disorders nutrition. Under the head of treatment of rheumatism, the alkaline eatment is recommended for "obese, florid, but flabby drinkers of alt liquors; the iron treatment for the pale, delicate, and anæmic oung subject; and the salicylic treatment for the vigorous, ablebodied subject of inherited tendency or rheumatic diathesis; while blisters may be, with proper precautions, utilized in all forms of the disease and combined with any plan."

Of all the remedies hitherto proposed for hydrophobia, curare, in the opinion of the author, is the only one which seems to possess any power over it. He refers to two cases—one in Italy, and one in New York—reported to have got well under the use of hypodermic injections of this remedy.

Although this treatise can not take the place of the larger works on the practice of medicine, for hasty reference it will prove of value to the practitioner and to the student as a good text-book. Dr. Bartholow has "no sympathy with the therapeutical nihilism of the day." His positive manner of recommending plans of treatment may tend to beget in the mind of the student a degree of confidence in the power of therapeutic agents which general experience does not warrant, and which the author himself may not entertain, but, on the whole, his suggestions are excellent, and may be followed safely.

The volume is of octavo size. The type is large and clear. The illustrations, though not numerous, are very good.

The Pathology, Diagnosis, and Treatment of Diseases of Women, including the Diagnosis of Pregnancy. By Graily Hewitt, M. D., Lond., F. R. C. P., Professor of Midwifery and Diseases of Women, University College, etc. Third American, from the third London, edition, revised and enlarged. With one hundred and thirty-two illustrations. Philadelphia: Lindsay & Blakiston, 1880. Pp. xii–751.

It is now twelve years since the publication of the first American dition of this work, which was a reprint of the second English edition.

This new edition contains sixty-six more pages and sixteen more illustrations than the first. The arrangement of the contents has been changed very materially. Whereas the subject of diagnosis formerly took up nearly the whole of the first half of the volume, so that the reader was obliged to turn to the latter part of the book to learn the pathology and treatment of any particular affection, we now find all that the author has to say on a given disease brought together under one head. This makes the work more convenient for reference than it was before, but we are inclined to think that he who reads it through in course will fail to get as clear an idea of the subject as was possible under the old arrangement; that is to say, the change is an improvement for the practitioner, but not for the student. It was essentially a book for students before, and a particularly good one from the very fact that the matter of diagnosis was presented apart, in the way that we have referred to.

In the first edition the author laid considerable stress upon abnormalities of shape, situation, and attitude of the uterus as primary elements in the clinical history of diseases peculiar to women. He now inculcates this doctrine with still greater emphasis, and founds his belief upon accumulated experience. Indeed, Dr. Hewitt may be regarded as, at present, the most prominent upholder of the mechanical theory of uterine pathology—a theory that seems to be losing ground steadily in other quarters, and one that, for our part, we can not but consider as radically erroneous. In particular, the author looks upon flexions of the uterus as prime factors of the manifold states of ill health traceable to pelvic disease in women. We judge that in practice he even goes so far as to found a provisional diagnosis between anteflexion and retroflexion upon symptoms alone—so close does he esteem the connection of each of these deformities with particular assemblages of symptoms. According such importance to flexions, he naturally directs his treatment very largely to their correction; consequently pessaries figure prominently, including the intra-uterine stem, and the bad practice of straightening out the uterus by means of the sound. These results of the mechanical theory are mitigated, to be sure, by the fact that the theory leads the author to reject that portion of the obstruction pathology of dysmenorrhœa that would refer the impediment to actual stenosis. He imputes the good effects of dilatation to the necessary straightening of the canal, rather than to its enlargement. This we regard as a step away from an untenable position, although not prepared to say that it is in the right direction.

Notwithstanding this undue significance attributed to versions and flexions, the author's handling of the various diseases of the pelvic contents in women is such as to be of great service to the general practitioner—especially in the matter of the connection between symptoms and their causes, and in that of the hygienic and medicinal treatment of the more common affections. We think, however, that the lesser grades of chronic pelvic peritonitis might with advantage have been treated of at greater length. This disease and its sequelæ are so common and of such importance that they ought to get far more attention than writers usually give them, since they are so apt to be overlooked on account of their insidious course and the unobtrusiveness of their physical signs. In the field of therapeutics, Dr. Hewitt does not seem to esteem the use of hot water at its just value, for we find him ignoring hot vaginal injections and alluding to Chapman's spinal bags only as a means of applying cold.

For the general practitioner, we repeat, the work is one of great worth. We think the specialist will seldom have occasion to refer to it, however, except for the author's views upon the mechanical theory of uterine pathology—views which, notwithstanding what we have said, merit the consideration that should always attach to doctrines founded upon patient and laborious investigation by so capable an observer as Dr. Hewitt is undoubtedly to be esteemed. Our reason for this opinion lies in the fact that what may be called major gynæcology does not receive the full consideration that the specialist finds needful. Uterine and ovarian tumors are treated of at some length, to be sure, but we fail to find adequate discussion of certain operative measures that are at present the subject of close study by professed gynæcologists—such, for instance, as laparotomy for the removal of uterine tumors, Freund's method of total extirpation of the uterus, Battey's operation of removing the ovaries for other than purely surgical reasons, the Listerian precautions in ovariotomy, etc. Under the head of ovariotomy, the author seems to prefer the clamp treatment of the pedicle, as a rule, and he gives a fair but rather brief account of its advantages and disadvantages. He describes and figures two contrivances of his own for fixing the stump of the pedicle in the wound in a manner to allow of regulating the tension. These he calls the "buckle-clamp" and the "ring-clamp," respectively, but neither the one nor the other seems to be really a clamp.

Dr. Hewitt's style of writing is readily intelligible, although not very forcible. The mechanical make-up of the volume is excellent. On the whole, we would commend the work as a desirable addition to the practitioner's library.

The Microscopist: a Manual of Microscopy, and Compendium of the Microscopic Sciences: Micro-Mineralogy, Micro-Chemistry, Biology, Histology, and Practical Medicine. Fourth edition, enlarged, with 252 illustrations. By J. H. WYTHE, A. M., M. D., Professor of Microscopy and Histology in the Pacific Medical College, San Francisco, Cal. Philadelphia: Lindsay & Blakiston, 1880. Pp. 434.

WE continue to give our praise to the many excellences of this work, which have been referred to in previous notices. The fact that it has now passed through a fourth edition is a substantial proof that it has been found a useful addition to the library of the student. "It is proposed," says the author, "to give such a *résumé* of microscopy as shall enable the student in any department to pursue original investigations with a general knowledge of what has been accomplished by others." The wide range of subjects, however, which are included in this volume seems to have compelled a brevity which in a serious degree defeats the author's aim. The student will most certainly not obtain in the departments of histology and pathology such a knowledge of normal and morbid tissues as will enable him, without reference to other manuals, to pursue a satisfactory course of investigation. In illustration of the more than ordinary brevity which exists, no description of the veins is given under the head of vascular tissue. No mention of the Schmidt's incisures or Ranvier's constrictions is found in the paragraph upon the nerve-fibers. One of the varieties of cartilage usually described is also omitted. Similar and more marked condensation is met with throughout these chapters, but the histo-chemistry is given with a clearness and fullness not to be found in any other text-book.

In the chapter upon morbid anatomy, with few exceptions, the illustrations are from Rindfleisch, and we regret that the author has rested content with simply reproducing these, instead of furnishing us with some original drawings. We think that the improvement in lenses and photo-lithographic and other processes, by which drawing is much facilitated and more perfectly reproduced, should induce authors to replace the now familiar figures of the past.

The value which the author claims for the microscope as an aid to diagnosis is to be inferred from the statement that "the time may come when more may be known of a patient's disease by an examination of a drop of blood under the microscope than is possible in any other way."

In the chapter upon the examination of urine, it is suggested that "the practitioner may estimate urea approximately by weighing the crystals of nitrate of urea (formed by adding nitric acid, etc.)." Such a method we consider more troublesome and less satisfactory than Fowler's test by the use of liquor sodæ chlorinatæ, by which the result is obtained in fifty minutes, and with but a few minutes' labor. To the general student of microscopy this work will serve as a convenient book of reference upon the many subjects to which the microscope is applied. To the student of medicine, even though possessing it, the manuals of Green, Frey, Rutherford, Prudden, and others will still, however, remain needed guides.

The Care of the Insane and their Legal Control. By JOHN CHARLES BUCKNILL, M. D., Lond., F. R. S., Fellow and Censor of the Royal College of Physicians, etc. London: Macmillan & Co., 1880. Pp. xl–133. Price, $1.

THIS volume contains the articles, revised and enlarged, on lunacy reform, which appeared anonymously in the "British Medical Journal" last year. The author reiterates, with earnestness and an air of sincerity, and with whatever added force his name can give (though the origin of the papers has been no secret), views which have been widely discussed and warmly controverted. (See the July number of this "JOURNAL," p. 110.) He regrets to censure those few medical men who seem to him honestly engaged in treating mental diseases in private asylums, and it was sympathy for them that led him to say, before a Select Parliamentary Committee in 1877, that he would be very sorry to see all private asylums abolished. His judgment is still that no physician should engage in the business of keeping a private hospital where patients are detained against their will; and, in fact, that no such asylum should be suffered to exist, but that sufficient State asylums should be established for the upper and middle classes; that provision should be made for domestic treatment of the harmless insane as single patients; and that a few of the best private asylums should be reorganized for the reception of voluntary patients; while no person should be restrained of liberty against his will, except by the action of a judicial tribunal.

The impression which one derives from this book of English proprietary asylums is most repulsive. Whatever crudities remain in the methods of providing for the insane in this country, it is certain that the comparative absence of secrecy and the frequency of inspection usual among us have tended to the comfort of the insane and to their safety from oppression.

Dr. Bucknill's reputation and experience, together with his remarkable power of expression, make his position appear very strong, but it is fair to remember that his views are at variance with those of the Commissioners of Lunacy and of most English alienists, if not with those of the great body of the profession.

On the Educational Treatment of Incurably Deaf Children. By W. B. Dalby, F. R. C. S., M. B. (Cantab.), Aural Surgeon to St. George's Hospital. London: J. & A. Churchill, 1880. Pp. 15. Price, 6d.

This pamphlet is intended to serve as a reply to numerous inquiries as to the details of treatment of the deaf and dumb, excited by a leading article in the London "Times" of June 23, 1880. The author read a paper on lip-reading and articulation at the Social Science Congress, at Leeds, in 1871, and contributed an article "On the Influence of Impaired Hearing on the Voice and Speech" to "St. George's Hospital Reports" for 1873. He prefers day schools to asylums, and would begin the education at the age of six or seven—eight years being required to teach a child to read from the lips of ordinary persons, and to be easily understood by them. The system is applicable to all deaf children with properly developed intellect, though the time and money needed make it questionable if this method is the best for the laboring poor. It can not be combined with dactylogy.

The fact of there being more than one system of educating deaf-mutes is now generally known; and for the past seven years Dr. Dalby has refrained from recommending either system to the parents of the large number of children of all classes who have come under his observation, but has given them free opportunity of observing both. In every instance the lip-reading method has been preferred, and has been relinquished only for pecuniary reasons.

Regarding those who become totally or partially deaf in early life, the author remarks that few people know how easily such children become dumb. This occurrence is closely comparable to the loss of a language when a child is taken from one country to another. (A comparative disadvantage of the use of manual signs, which at once suggests itself, is, that it does not aid in preserving speech, but the reverse; while lip-reading and talking are associated actions.)

So far as concerns speech, the future of a child who loses hearing is determined by its age, the degree of the deafness, and its ability to read—factors almost equally important. So long as *either* is favorable, the child has a good chance of retaining speech, with proper care, if the education is begun *at once.* Success varies immensely with the degree of deafness, the most remarkable results being attained with those who understand more or less perfectly what is clearly pronounced in their ear.

The reasons which have governed the change that has taken place in the education of the deaf and dumb in England can not apply with less force in this country. It would be interesting to learn how the problem is affected by the precocity and the alleged nervous activity of American children.

Neuralgia: Its Nature and Curative Treatment. By THOMAS STRETCH DOWSE, M. D., F. R. C. P. E., etc. New York: G. P. Putnam's Sons, 1880. Pp. xiii–198. Price, $2.25.

WE have read about two thirds of this book, and it is quite possible that we shall never finish it. The text proper contains scarcely a paragraph (so far as we have read) but what, did space allow, we should feel called upon to criticise adversely. We shall therefore confine ourselves for the most part to a few general remarks. The author states, with all the emphasis of italics, that "all neuralgias are curable, if the disease be taken," etc.—a statement that the general tenor of the book does not wholly bear out, and one, we think, of the truth of which it would tax the author's ingenuity to convince the experienced practitioner. The work abounds in short clinical histories, which, although they possess little if any scientific value, give numbers of therapeutical expedients that are likely to prove suggestive to those who are not well acquainted with the details of treating the various forms of neuralgia. Such are to be found in the text also, and we think they give the book all the value it can claim. For its suggestions, then, or rather its reminders, the work may prove convenient to well-educated practitioners; but any one attempting to acquire from it a systematic knowledge of neuralgia would have to contend with about such difficulties as would beset a painter trying to sketch a foreground from a railway train in rapid motion.

Thus much for the matter. The manner is simply slovenly. In speaking of ovarian neuralgia (which the author thinks "ofttimes much more common" than is usually supposed), he states that we must consider the ovary's "sympathy with the generative organs"—as if it were not one of them! The following prescription (p. 82) is a model of "how not to do it": "℞ Mist. Guaiaci Cœ. ad ℥ ij; Potassii Iodidi, gr. x; Potassæ Bicarb., ʒ ss; Quinine, gr. ij; Mp.

Haustus ter die sumendus (if properly prepared the quinine is held in suspension)." It is possible, to be sure, that some of these errors, as well as the dreadful havoc made with proper names, foreign words, and the like, may be due to faulty proof-reading. The volume is well printed and attractively bound.

Treatise on Therapeutics. Translated by D. F. LINCOLN, M. D., from French of A. TROUSSEAU, Professor of Therapeutics, etc., and H. PIDOUX, Member of the Academy of Medicine, etc. Ninth edition, revised and enlarged, with the assistance of CONSTANTIN PAUL, Professor Agrégé, etc. Volume II. New York: William Wood & Co., 1880. Pp. vi–299. [Wood's Library of Standard Medical Authors.]

THE second volume of this work is divided into four chapters. The first contains an elaborate discussion of antiphlogistic treatment in general, concluding with special considerations as to its applicability in different diseases. The second, third, and fourth treat respectively of evacuants, excito-motors, and narcotics; in each case the discussion of drugs in detail is followed by a very philosophical review of their action in general. As was the case in the first volume, these general discussions, characterized by great originality, force, and clearness, constitute the peculiar feature of the work.

The Practitioner's Handbook of Treatment; or, the Principles of Therapeutics. By J. MILNOR FOTHERGILL, M. D., M. R. C. P. L., Assistant Physician to the City of London Hospital for Diseases of the Chest, etc. Second American, from the second English, edition, enlarged. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. xx–17 to 647 inclusive.

THIS work has proved very acceptable to the profession; the first edition was sold out very rapidly, and for a year it has been impossible to obtain a copy. It has been offered as an objection that the plan is somewhat disjointed, and that articles on different subjects are grouped unsystematically. This fault is almost unavoidable, for the reason that the author has been unable to refer to other works as models, his being the first attempt in precisely this direction. The lack of system is, at the same time, less important in a work which does not claim to be in any way a text-book. It is customary with a large part of the profession to decry books which give prescriptions and dwell upon minute details in connection with the administration of medicines;

they say that the student should learn to think for himself, and should originate prescriptions, and not remember them. This is, in the main, true; yet the large sales of books which are mere lists of formulæ and prescriptions show that a want is felt for something more definite than the general directions commonly given. Dr. Fothergill's work is a happy medium between Napheys's accumulation of prescriptions and H. C. Wood's elaborate discussion of physiological actions as a basis of philosophical therapeutics.

Some new matter is given in this edition, including such topics as "When not to give Iron," "The Functional Disturbances of the Liver," "The Means of Acting on the Respiratory Nerve Centers," "The Reflex Consequences of Ovarian Irritation," and "Artificial Digestion." All these subjects, it will be seen, are of practical importance, and their consideration can not fail to give the work an enhanced value. It is to be regretted that salicin, salicylic acid, jaborandi, pilocarpin, and hydrobromic acid are dismissed with a cursory mention in an appendix of less than two pages; this is inexcusable in a work bearing the date 1880.

The Practitioner's Reference Book. By Richard J. Dunglison, A. M., M. D., etc. Second edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1880. Pp. 476.

That this work has reached a second edition in the course of three years seems to show that it has found favor with the profession. Chief among the matter added to it in this edition are chapters on metric prescription-writing; on the use of the hypodermic syringe, the galvanic battery, and the clinical thermometer; on the application of trusses; on the preparation of stained microscopic sections; and on the treatment of intestinal diseases in children—together with numerous tables. To those of our readers who are not acquainted with the book, we would simply say that it contains a good deal of practical information upon matters not usually included in more pretentious works, but of a sort, nevertheless, that the practitioner is often at a loss to find; and that it is very conveniently arranged for reference.

Transactions of the American Gynæcological Society. Volume IV, for the year 1879. Boston: Houghton, Mifflin & Co., 1880. Pp. viii–506.

We shall not here enter upon an analysis of this volume, for the reason that most of the papers contained in it are mentioned, and several of them given in abstract, in our "Reports on the Progress of Medicine"; but will simply express our admiration of the elegant style in which the book is put forth—creditable alike to the society, to the secretary (Dr. Chadwick, of Boston), and to the publishers. Besides the society's transactions, it contains the continuation of a well-arranged and exceedingly valuable index of current gynæcological literature.

L'Apomorfina: Azione ed Usi. Del Dott. C. Ruata. Padova: Tipografia del Seminario, 1880. Pp. 31.

As a result of many and careful experiments upon lizards, frogs, rabbits, and dogs, supplemented by observations of its action upon the human subject, the author comes to the following conclusions with reference to the therapeutic effects of apomorphia. It is the best drug where prompt, safe, and copious emesis is desired. Administered hypodermically, in the dose of three milligrammes [gr. $\frac{1}{20}$] to a strong adult, or one milligramme [gr. $\frac{1}{66}$] to children or weak women, it is not followed by bad effects, and causes vomiting in five or ten minutes. The dose should be doubled, if taken by the mouth; and even then the action of the remedy is less certain and more apt to be delayed. Respiration and cardiac action are at first stimulated; after emesis has occurred, both are somewhat depressed. The temperature is slightly lowered, and great muscular weakness follows. These effects rapidly disappear after the emetic action of the remedy has come to an end. The drug is probably eliminated in all the excretions; neither the excretions nor the secretions are very much modified as regards their character or quantity. The author has tried apomorphia in strychnia poisoning, but without good effect; he recommends its use in true croup. Two varieties of apomorphia are in the market—the crystalline and the amorphous; the former is more expensive, but, at the same time, it is more reliable.

The Student's Dose Book and Anatomist, combined. By C. Henri Leonard, A. M., M. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology, Michigan College of Medicine, etc. Detroit: "Leonard's Illustrated Medical Journal," 1880. 12mo, pp. 60.

Whatever may be the points of excellence in this little book, we do not approve of the class to which it belongs, and we therefore deem it unnecessary to enter upon a criticism of its contents.

Books and Pamphlets Received.—A Treatise on the Practice of Medicine, for the Use of Students and Practitioners. By Roberts Bartholow, M. A., M. D., LL. D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College of Philadelphia, etc. New York: D. Appleton & Co., 1880. Pp. xvi–853. ═══ The Art of Prolonging Life. By Christopher William Hufeland. Edited by Erasmus Wilson, M. D., author of "A System of Human Anatomy," etc. From the last London edition. Philadelphia: Lindsay & Blakiston, 1880. 12mo, pp. 298. [Price, $1.00.] ═══ Leçons Cliniques sur les Maladies des Femmes. Par T. Gallard, Médecin de la Pitié, etc. Seconde édition, revue et augmentée. Avec 158 figures intercalées dans le texte. Paris: J. B. Baillière et Fils, 1879. Pp. vi–1000. ═══ Notes on Diseases of Women, specially designed for students preparing for examination. By J. J. Reynolds, M. R. C. S. Eng. London: J. & A. Churchill, 1880. Sm. 8vo, pp. ix–86. ═══ A Treatise on the Diseases of the Eye. By J. Soelberg Wells, F. R. C. S., etc. Third American, from the third English, edition, with copious additions. By Charles Stedman Bull, A. M., M. D., Surgeon and Pathologist to the New York Eye and Ear Infirmary, etc. Illustrated with two hundred and fifty-four engravings on wood, and six colored plates, together with selections from the test-types of Prof. E. Jaeger and Prof. H. Snellen. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. xix–33 to 895, inclusive. ═══ Diseases of the Throat and Nose, including the Pharynx, Larynx, Trachea, Œsophagus, Nasal Cavities, and Neck. By Morell Mackenzie, M. D., London, Senior Physician to the Hospital for Diseases of the Throat and Chest, etc. Vol. I. Diseases of the Pharynx, Larynx, and Trachea. Philadelphia: Presley Blakiston, 1880. Pp. 570. [Price, $4.00.] ═══ Diseases of the Pharynx, Larynx, and Trachea. By Morell Mackenzie, M. D., London, Senior Physician to the Hospital for Diseases of the Throat and Chest, etc. New York: William Wood & Co., 1880. Pp. viii–440. [Wood's Library of Standard Medical Authors.] ═══ A Practical Treatise on Nasal Catarrh. By Beverley Robinson, A. M., M. D. (Paris), Lecturer upon Clinical Medicine at the Bellevue Hospital Medical College, New York, etc. New York: William Wood & Co., 1880. Pp. x.–182. ═══ Hygienic and Sanative Measures for Chronic Catarrhal Inflammation of the Nose, Throat, and Ears. Part I. By Thomas F. Rumbold, M. D. St. Louis: George O. Rumbold & Co., 1880. Pp. 174. ═══ A Manual of Minor Surgery and Bandaging. By Christopher Heath, F. R. C. S., Surgeon to University College Hospital, etc. Sixth edition, revised and enlarged, with one hundred and fifteen illustrations. Philadelphia: Lindsay & Blakiston, 1880. Pp. xvi–17 to 342, inclusive. [Price, $2.00.] ═══ School and Industrial Hygiene. By D. F. Lincoln, M. D., Chairman, Department of Health, Social Science Association. Philadelphia: Presley Blakiston, 1880. Sm. 8vo, pp. 152. [American Health Primers.—Price, 50c.] ═══ Abridged Therapeutics; founded upon Histology and Cellular Pathology. With an Appendix. Special Indications for the Application of the Inorganic Tissue-Formers.

By W. H. Schüssler, Dr. Med. et Chir. Authorized Translation. By M. Docetti Walker. Edinburgh, New York, 1879. Sm. 8vo, pp. 91. [Sold by Gavin Houston, New York.] ═══ Remarks on Pepsine. By J. S. Hawley, A. M., M. D., etc. Brooklyn, 1880. Pp. 40–iv. ═══ Saint Thomas's Hospital Reports. New Series. Edited by Dr. Robert Cory and Mr. Francis Mason. Vol. X. London: J. & A. Churchill, 1880. Pp. xiv–491. ═══ Medical Communications of the Massachusetts Medical Society. Vol. XII, No. vi, 1880; second series, Vol. VIII, Part vi. Boston: David Clapp & Son, 1880. Pp. 353 to 471 and (proceedings) 163 to 190, inclusive. ═══ Report on Education. By E. Seguin, United States Commissioner on Education at the Vienna Universal Exhibition. Second edition. (Authorized and revised by the author.) Milwaukee, Wis.: Doerflinger Book and Publishing Co., 1880. Pp. 215. ═══ Seventeenth Annual Report of the New York Society for the Relief of the Ruptured and Crippled. ═══ Report of the Bureau of General Sanitary Science, Climatology, and Hygiene to the American Institute of Homœopathy, session of 1880. ═══ The Rise of American Dermatology: being the President's Address before the . . . . American Dermatological Association . . . . 1879. By Louis A. Duhring, M. D. [Reprint.] ═══ President's Address to the Maine Medical Association, 1880. By Seth C. Gordon, M. D., of Portland. ═══ The Book of the Rules of the Medical Association of the State of Alabama. Montgomery, Ala.: Barrett & Brown, 1880. ═══ National Association for the Protection of the Insane and the Prevention of Insanity. Boston: Tolman & White, 1880. Pp. 31. ═══ Catalogue of the Library of the Physicians to the German Hospital and Dispensary, New York. By Hermann G. Klotz, M. D., Librarian. ═══ The Indications for Treatment in Fractures at the Elbow. By Lewis S. Pilcher, M. D. [Reprint.] ═══ Litholapaxy and Lithotomy, etc. By H. O. Walker, M. D., etc. [Reprint.] ═══ Perinephritis, etc. By V. P. Gibney, M. D., etc. [Reprint.] ═══ Notes on the Management of Orthopædic Cases. By Virgil P. Gibney, M. D., etc. [Reprint.] ═══ Case in which various Foreign Bodies were inserted in the Brain with Suicidal Intent, and retained there for several Months. By Wm. B. Carpenter, M. D. [Reprint.] ═══ Hernia in Children, etc. By Edward Swasey, M. D., etc. [Reprint.] ═══ Myopia in its Various Phases. By Julian J. Chisolm, M. D., etc. [Reprint.]

Clinical Reports.

BELLEVUE HOSPITAL.

Reported by GASPAR GRISWOLD, M. D.

HEMIPLEGIA WITH APHASIA AND FACIAL PARALYSIS—WAS IT CAUSED BY CEREBRAL HÆMORRHAGE OR BY EMBOLISM?

(SERVICE OF DR. E. G. JANEWAY.)

T. K., an Irish woman, thirty-three years of age, single, a seamstress by occupation, was admitted to the hospital on August 4th. She had been in the hospital two years before, suffering from heart-disease; she was an intelligent woman and gave a clear history. Her mother suffered from rheumatism, and died of heart-disease and paralysis; one brother also had rheumatism, and died of heart-disease. When the patient was twelve years of age, she experienced her first attack of acute articular rheumatism; it was severe, and confined her to the bed for several weeks. At that time she suffered from pain referred to the heart. A second attack of rheumatism occurred five years afterward. She began to suffer from dyspnœa ten years ago; this has steadily increased up to the present time. Three years ago, and again six months later, she had a severe attack of hæmoptysis and urgent dyspnœa; both of these attacks followed exertion. She had never been much troubled with anasarca or bronchitis. Three weeks before her admission, while walking across the room, she suddenly fell to the floor. She is quite sure that she did not at any time lose consciousness, and distinctly remembers her astonishment at being unable to move her arm and leg. Her left arm and leg were completely paralyzed; sensation was not much affected. Facial paralysis was well marked—also on the left side. The patient herself (being perfectly conscious) and her friends noticed that her pronunciation was thick and mumbling, and that she repeatedly used the wrong word to express an idea; she realized that she was using the wrong word, but was unable to remember the right one. The attack was sudden, without headache or other premonition; no convulsions occurred. At the time of her admission the hemiplegia was still complete; the facial paralysis was no longer distinct. The aphasia, amnesic and ataxic, gradually diminished, and had entirely disappeared two weeks after the attack. On physical examination, very distinct aortic direct and mitral obstructive murmurs were heard; the pulse was small, and weak out of proportion to the action of the heart, which was much hypertrophied, the apex beat being felt in the seventh intercostal space, just outside of the nipple line. A well-marked "purring thrill" accompanied the presystolic murmur. The patient presented no evidence of phthisis or of renal disease. About the 1st of September the power of motion began to return in the leg, the arm still remaining paralyzed. *September 25th.*—The patient's mental faculties are unaffected; her leg has so far recovered that she can walk about with the assistance of a cane. She is gradually regaining control over her arm.

The age and sex of the patient, the coëxistence of valvular disease of the heart, and the fact that consciousness was not lost during the attack—all point toward embolism as the probable cause. The occurrence of the hemiplegia on the left side and the gradual recovery (not yet complete after nearly three months) are more suggestive of hæmorrhage. As a rule, hemiplegia dependent upon embolism is recovered from in a few days, the collateral circulation being established and relieving the local cerebral anæmia upon which the symptoms depend. It has also been observed that, in cases of hemiplegia from embolism, if recovery does not take place in a few days, it generally does not take place at all, the paralysis remaining permanent. This is explained by the fact that, if the embolus is so situated as to permit the establishment of a collateral circulation, functional activity is rapidly restored; while, if the position of the embolus renders collateral circulation impossible, irremediable necrotic changes in the area supplied by the plugged vessel are unavoidable. A gradual recovery is, therefore, strongly indicative of hæmorrhage. Despite the comparative youth of the patient, might not hæmorrhage have occurred, predisposed to by a weakening of the arteries dependent upon the considerable cardiac hypertrophy present? Probably not. The cardiac lesions are both obstructive, and the pulse is small; hypertrophy in aortic stenosis is always subordinate to the narrowing of the aortic orifice, and does not increase the strain brought to bear upon the arterial walls. Indeed, by the time the hypertrophy is well declared, the arteries contain too little blood, and the tendency is to anæmia rather than to increased tension. The probabilities in the case seem rather in favor of embolism, but the contradictory indications are such as to justify the statement of Bamberger, that he seldom ventures upon a positive diagnosis of the cause of hemiplegic and apoplectic attacks. The very unusual coexistence of aphasia with hemiplegia and facial paralysis on the left side adds to the interest of the case.

OBSCURE CASE OF OBSTIPATION: AUTOPSY DISCLOSES GENERAL PERITONITIS, SECONDARY TO SUPPURATION AND RUPTURE OF THE RIGHT FALLOPIAN TUBE.

(SERVICE OF DR. E. G. JANEWAY.)

S. O., a French woman, forty-nine years of age, was admitted to the hospital on August 3d, complaining of obstipation of fourteen days' duration. She was a married woman, and had had several children—the last one some years previously; she had never suffered from uterine symptoms, beyond a slight leucorrhœa. She positively denied having ever had any venereal disease, and presented no symptoms calculated to excite suspicion in that direction. She could assign no cause for her present illness, but considered it to be merely an exacerbation of a tendency to constipation which was habitual with her. Within the last two or three days, however, she had begun to vomit and to suffer from abdominal soreness; these symptoms induced her to seek advice at the hospital. Her tongue was coated, but not dry; she had no appetite, and vomited at intervals a greenish mucus, which, however, was not distinctly the "spinach vomit" of peritonitis, and certainly was not stercoraceous. She retained with difficulty small quantities of milk and lime-water. Her face was pale, but lacked the drawing of the upper lip across the teeth and the otherwise peculiar expression considered to be characteristic of peritonitis. The abdomen was tympanitic, but not very tender; pain was present, but not sufficiently acute to oblige her to remain quiet or induce her to flex her thighs. Palpation of the abdomen and vaginal examination failed to disclose any fæcal mass, or any point of special tenderness. The urine seemed to be normal in all respects. There was absence of fever, and the pulse was eighty to the minute, and fair in quality. The respirations were occasionally twenty-two or twenty-four to the minute, but not distinctly costal in type; indeed, they presented no abnormality not attributable to the tympanites. The mind was perfectly clear; the abdominal pain and soreness were constant and diffused, presenting nothing paroxysmal. The data seemed insufficient to warrant a diagnosis of peritonitis. There was no history of lead poisoning; and the blue line on the gums, the paralyses, and the colicky pains were all absent. There was no hernia that could be discovered; the age of the patient, her freedom from tenesmus, and the absence of a tumor, were against intussusception. No tumor could be found pressing upon the intestines; exploration with a bougie demonstrated the absence of rectal stricture. There was no evidence of cardiac disease to suggest embolism of either mesenteric artery, causing paralysis of a portion of intestine. There was no history of anything which might have caused new connective-tissue formations, including a coil of intestine and subsequently contracting. By a process of exclusion a probable diagnosis was reached of functional obstipation. Ox-gall enemata were ordered; and three were administered, at intervals, without any satisfactory result. On the 5th of August, the patient's condition remaining the same, she was given a drop of croton-oil in an ounce of castor-oil. The next day, no effect having followed the above-mentioned dose, it was repeated. *August 7th.*—Obstipation continues. The patient is very weak; she has no appetite, and vomits even the milk and lime-water. Her pulse is one hundred to the minute and very feeble. The respirations are shallow and sighing; the temperature is 101° F. During the afternoon she became much weaker and lost consciousness. She died of asthenia at 11 P. M. An autopsy showed the signs of general peritonitis; the intestines, liver, and uterus presented patches of fibrinous exudation, and at the bottom of the peritoneal cavity was found pus to the amount of twelve ounces. The right

Fallopian tube was dilated by a collection of pus, a rent in the sac showing the point where it had discharged into the peritoneal cavity. The left Fallopian tube was also inflamed and dilated with exudation, but had not ruptured. The other viscera presented nothing abnormal.

COMPLETE PROLAPSE OF THE RECTUM; REDUCTION; RECOVERY.

(SERVICE OF DR. C. PHELPS.)

A. Z., a German, thirty-eight years of age, a laborer, was admitted on August 28th. Ten days before his admission he began to suffer from tenesmus, and noticed bloody mucus in his stools. Four days before his admission his bowels became very loose, moving often during the day; these passages were attended with pain and great tenesmus, and continued to occur frequently up to the time of his admission. On the morning of his admission, while straining at stool, he experienced a sensation as if he were having a large passage, and thereupon became conscious that a considerable protrusion of the bowel had taken place. Efforts to return it proving fruitless, he was taken to the hospital. On examination, a prolapse of the rectum was discovered, about seven inches in length and as thick as a man's fist. The size of the protrusion and the presence of transverse folds on its surface showed the prolapse to be complete—that is, consisting of the muscular walls of the rectum as well as its mucous membrane. The prolapse was not secondary to intussusception, but belonged to that variety in which the external surface is continuous with the mucous membrane covering the anus. Several hours having elapsed since its descent, the bowel was much congested, blood oozing from its surface at the slightest touch; it was not, however, very sensitive, and considerable pressure could be applied without causing much pain. On this account ether was not administered; the patient having assumed the knee-chest posture, persistent and careful taxis was successful, at the end of twenty minutes, in effecting complete reduction. Not much pain, and no signs of shock followed this operation. The rectum was washed out with a copious hot enema, and one grain of opium was administered. Orders were given that the patient should be kept perfectly quiet, and should receive half a grain of opium every three hours. *August 29th.*—The patient suffers little or no pain; some tenesmus occasionally occurs, and a small quantity of bloody mucus has been passed. Opium increased to one grain every three hours. The temperature, pulse, and respirations are about normal. *30th.*—Temperature 100.25° F.; pulse 96; respirations 22. There is some tympanites, and abdominal soreness is complained of. The opium is accordingly increased to one grain every two hours. Late in the afternoon, the respirations having decreased in frequency to twelve to the minute, the dose of opium is again changed—this time to half a grain every three hours. During the evening the patient had a small passage, no prolapse occurring. Very little pain was complained of after this, and he passed a comfortable night. *September*

4th.—The patient's condition has not changed much since the last note, except to improve gradually. The opium has been continued, half a grain every three hours. Several small movements of the bowels have occurred, without any tendency to recurrence of the prolapse. The temperature, pulse, and respirations have not varied appreciably from the normal, and soreness of the abdomen and tympanites have at no time been considerable. *10th.*—The patient's condition is so good to-day that he requests to be discharged, and leaves the hospital. *21st.*—The patient returned to-day to report his condition, and ask advice with reference to a diarrhœa which is troubling him. The rectum has manifested no tendency to prolapse again.

OPIUM POISONING; RECOVERY.

(SERVICE OF DR. E. G. JANEWAY.)

L. R., a woman, twenty-four years of age, was brought to the hospital at 12.20 A. M., August 24th, having taken four grains of morphia an hour before. She was comatose, but could be roused slightly with difficulty; her pupils were contracted, her skin moist, and her muscles relaxed. Her respirations were from four to six to the minute, shallow and inefficient; her heart was beating slowly and feebly, and her pulse was compressible. A ninety-sixth of a grain of atropia was administered hypodermically; and an emetic of mustard and warm water was given, acting promptly. The atropia was repeated twice at intervals of an hour; meantime, strong coffee was freely given, and the Faradaic current was used upon different parts of the body with a view to general stimulation. The atropia did not cause dilatation of the pupil, but the respirations and pulse improved rapidly. At 4 A. M. the patient was so far recovered that she was allowed to go to sleep. Convalescence progressed without further incident.

◆

Proceedings of Societies.

NEW YORK CLINICAL SOCIETY.

A REGULAR meeting was held May 28, 1880, Dr. W. H. KATZENBACH chairman for the evening.

DISTENTION OF THE TUNICA VAGINALIS FROM PARACENTESIS ABDOMINIS.—Dr. DELAVAN mentioned an unusual occurrence in connection with abdominal paracentesis. The patient, a man sixty years old, had cirrhosis of the liver, and was tapped in the usual way with trocar and cannula. The operation was done in a hospital by the house physician and his assistant. A strong sheet was placed around the patient, and rather an unusual amount of force was applied with it. The fluid was rapidly and forcibly discharged. Coincidently with the discharge of the fluid, the scrotum swelled until it reached the size of a foot-ball from effusion into the tunica vaginalis. The abdominal pressure being discontinued, the scrotum ceased to enlarge, and subsequent strapping reduced the swelling within forty-eight hours. There was no history of hernia, nor did a careful subsequent examination discover one. It seemed probable that a communication existed between the cavity of the abdomen and that of the tunica.

Teratoma.—Dr. Norris described a tumor which he had seen in a child born at the end of the seventh month of gestation. A subsequent examination by Dr. Peabody showed it to be a teratoma. It was situated in the gluteal region, and was firm and bi-lobed, containing some cysts filled with a clear, serous fluid. During the expulsion of the child the upper part of the cutaneous attachment of the tumor was torn, and the tumor itself was dragged somewhat from its bed, leaving the muscular tissue beneath it exposed, and clearly showing that the latter was not involved in its growth. It was not connected with any of the contiguous bones, nor was it a case of spina bifida. The size of the tumor was about equal to that of the child's trunk. The rectum was surrounded by the growth, and the anus was displaced downward so that it looked toward the left thigh. No other abnormalities were observed, except that both the abdominal and the thoracic cavities were full of clear serum. The fœtus was extracted with forceps after forty-eight hours of labor. The head presented, and the tumor offered no special impediment to delivery.

Treatment of Gonorrhœa.—Dr. Kelsey mentioned a case of gonorrhœa which had been treated unsuccessfully by the abortive method. During the first three days of the discharge, mild astringent injections were used, consisting of sulphate of zinc and claret and water. The patient urged upon the doctor some method by which he might hope to obtain more speedy relief, and a solution of nitrate of silver (gr. x to f ℥ j) was injected and retained two or three minutes. On the following day there was considerable œdema of the prepuce, with partial paraphymosis, and the discharge was much increased. ═══ Dr. Katzenbach had seen similar œdema follow the use of medicated bougies. He thought the abortive treatment of gonorrhœa was becoming obsolete. ═══ Dr. Foster asked concerning the present views upon the relative value of internal treatment and treatment by injection. ═══ Dr. Kelsey preferred internal medication, though he had seen gleet subside in a gratifying way under simple deep injections. He thought gonorrhœa resembled an acute coryza, and that, as in that condition, local treatment was unsatisfactory. ═══ Dr. Katzenbach was in favor of the use of injections. He sometimes employed bismuth, after the plan recommended by Ricord, the formula being: gr. xxx to xl of bismuth, f ℥ ss of glycerine, and ℥ iij of water. As additional treatment, he used copaiba and bismuth by the stomach, as prepared in capsules by Matthey-Caylus. ═══ Dr. Winters preferred treatment by injections. He had used injections of warm water, and found them efficient, promoting cleanliness. A weak solution of carbolic acid had the same effect, and was sometimes employed by him before beginning with astringent solutions. He thought the intervals between injections should not be very long. ═══ Dr. Norris regarded the treatment by injections as more satisfactory than that by internal medication. He had used a solution of permanganate of potassium (gr. v to f ℥ j) with gratifying effect. ═══ Dr. Partridge preferred treatment by injection, one advantage over internal medication being that the stomach was not deranged. Attention to detail in treatment was important, an astringent injection that would produce little or no pain being preferable.

He directed the patient to retain the injection for about two minutes, and advocated its frequent use, sometimes as often as every three hours. It was well to keep the urine alkaline. Care should be taken in the choice of a syringe. In severe cases of gonorrhœa, micturition in the sitting posture would obviate the pain to a considerable degree. He had used solutions of permanganate of potassium without any decided success, but the solutions had been much weaker than those used by Dr. Norris.

A REGULAR meeting was held June 25, 1880, Dr. L. B. BANGS chairman for the evening.

LATERAL DEVIATION OF THE SEPTUM NARIUM. — Dr. DELAVAN mentioned the somewhat singular occurrence of three cases of acute purulent catarrh in the same family at the same time. Those affected were aged respectively six months, two and a half, and four years. In the three children the disease was confined entirely to the left nostril, although there was no deviation of the septum, congenital or acquired. Ordinary treatment effected a cure. It seemed probable that contagion was an important element in the causation. In answer to a question, Dr. DELAVAN said that contraction of the nasal passages, whether from deviation of the septum or from any other cause, favored the establishment and continuance of chronic catarrh. Dr. Harrison Allen, of Philadelphia, had examined a large number of skulls with reference to this matter, and reported to the Academy of Sciences. The results had shown that a large proportion of people had some deviation of the septum nasi from the median line. The treatment recommended was to break the vomer with a strong forceps, and obtain repair while the septum was kept in proper position. ═══ Dr. ABBE thought that in many cases this method of treatment must fail, as the deviation might exist in the cartilaginous part of the septum, which was very elastic. ═══ Dr. BANGS alluded to the case of a young man who had been under his care for the relief of too frequent seminal emissions. It was found that these occurred only when the patient was sleeping on his left side, and it was also found that, notwithstanding the urgent endeavor of the patient to sleep on the right side, he would unconsciously turn upon the left. The cause for this was found to be a deviation of the septum nasi toward the left nostril, very much contracting it; and, when he lay on his right side, the contracted nasal passage being uppermost and the lower or unobstructed one being partially closed by the pressure of the pillow, he failed to obtain sufficient entrance of air, and consequently experienced a sense of discomfort which led him to turn on the left side. Treatment was directed toward the relief of the nasal deformity. An endeavor was made to crush the partition with a strong forceps, but it was unsuccessful. Then a piece of the cartilaginous division was removed, and it was then possible to cleanse the obstructed passage thoroughly. Finally, by the contraction attending the repair of this opening, considerable improvement took place, the convexity being partially obliterated. The patient, being now able to sleep on the right side, was encouraged to do so, and the frequency of the emissions was much reduced. ═══ Dr. ELY said that the effect of a contracted nasal passage upon the hearing was difficult to determine, as the resulting catarrh might be the efficient agent producing the deafness. In all cases of catarrh he had found the disease to be worse on the side which was least pervious. ═══ Dr. DELAVAN thought that in acute coryza, when the patient was lying down, the lower nostril soon became occluded. This he thought to be due in part to the entanglement of mucus in the projections of the turbinated bones.

FOREIGN BODIES IN THE ŒSOPHAGUS.—Dr. ABBE mentioned the case of a boy, fourteen years old, who had swallowed a pin and had eaten considerable bread for the purpose of making the pin descend into the stomach. He felt the pricking, as if the pin were still lodged in the pharynx, and referred it to the left side. A portion of the pin could be seen glistening, behind the cricoid cartilage, in the upper fold of the œsophagus. Efforts to remove it with the forceps were unsuccessful. The point of the pin seemed to be directed toward the left side and impacted. Abandoning the mirror, the finger and forceps were employed, and upon the fourth attempt the pin was removed. It was found bent, and had evidently been lodged upon the right side. It was customary in the South, when objects had accidentally been swallowed, to feed the patient on sweet potatoes, with the hope of producing constipation, thus imbedding the foreign body in fæcal matter, in order to render it harmless to the intestinal mucous membrane in its passage. A case had been treated by Dr. Sands, in which a nail was passed without injury to the patient, the diet having been, largely, crackers and cheese.═══Dr. **Delavan** remarked that the case illustrated, what was generally true, that sensations about the throat were very deceptive. He mentioned a case of Dr. Chauncey Field's, in which a needle entered the larynx, and was removed by cutting through the cricoid cartilage. ═══ Dr. **Foster** referred to a method of treating foreign bodies in the œsophagus, when they were bulky and capable of being broken, that he had lately seen mentioned by Langenbeck, which was to crush them by external pressure. In the country, he had known of a practice of relieving cows, when they had apples lodged in the œsophagus, by breaking the apple with wooden mallets used externally.

Hereditary Syphilis.—Dr. **Partridge** mentioned the case of a woman, twenty-five years old, who had an extensive ulceration of the pharynx, with a hole three fourths of an inch in diameter through the soft palate. The ulceration had been progressing for several years, but was always checked by the use of iodide of potassium. Several pieces of bone had been removed from the roof of the mouth. During the last five years she had had three healthy children, the youngest being now two months old. Except the presence of nodes on the shins, there was nothing more, either in her history or in her appearance, that would suggest syphilis. Her father was believed to have had syphilis. She had never had a miscarriage nor lost a child. The question was, regarding the possibility of the case being one of inherited syphilis. ═══ Dr. **Abbe**, who had seen the case, felt satisfied that it was not lupus. ═══ Dr. Fox thought abortion more likely to occur in hereditary than in acquired syphilis. He had seen a number of cases of lupus of the tongue and mucous membrane, and believed them more common than was generally supposed. In affections of the mucous membrane, the question would often lie between syphilis and epithelioma. As far as the lesions of syphilis were concerned, there was nothing in *them* to assist in distinguishing between acquired and congenital syphilis. ═══ Dr. **Partridge** referred to Fournier and Ricord as authority for certain views upon the tardy development of congenital syphilis. The former had reported two cases of ulcerations of the palate and pharynx, tubercular and gummy, occurring at about the twentieth year. Ricord had spoken of cases in which the disease was not apparent until still later. In the cases of tardy development there was no proof of the absence of symptoms during infancy. ═══ Dr. **Bangs** thought the symptoms of congenital syphilis were less likely to be overlooked than those of the acquired disease. A syphilitic woman, under suitable treatment, might give birth to a child which would never present symptoms of syphilis. A gentleman, a patient of his, had married while in the active period of syphilis, and his wife, when six months pregnant, contracted from him a chancre of the lip. During the three remaining months of pregnancy she was under treatment, and her child, now four years old, had shown no evidence of syphilis. A younger child also was in perfect health.

Malformations of the Upper Limbs.—Dr. **Delavan** showed some casts of congenital malformations of the upper extremities. One of them had been taken from an adult. The forearm was perfect, although smaller than its fellow. In place of the carpus, there was a broad, bony plate. There was no element of heredity in the case. The other casts had been taken from a child two and a half years old. The father and the grandfather had had similar deformities. In one hand, the ring and middle fingers were absent. The forearm contained but one bone, probably the ulna. There was, however, considerable power of pronation, owing to the flexibility of the wrist. The left hand had one finger and the thumb.

E. L. Partridge, M. D., *Secretary.*

Reports on the Progress of Medicine.

QUARTERLY REPORT ON SURGERY.

No. IV.

By CHARLES B. KELSEY, M. D.,

SURGEON TO THE EAST SIDE INFIRMARY FOR DISEASES OF THE RECTUM.

1. Savory, W. S.—On constitutional disturbance. "Brit. Med. Jour.," Aug. 14, 1880.
2. Krishaber.—L'éclairage des cavités du corps au moyen de la lumière électrique. "Gaz. Hebdom.," July 2, 9, 1880.
3. Stein.—Elektrische Beleuchtung von aussen zugänglicher Körperhöhlen, sowie über einige elektrische Apparate zur medicinischen Diagnostik. [Vers. deutsch. Naturf. u. Aerzte.] "Med.-chir. Centr.-Bl.," July 30, 1880.
4. Eve, F. S.—On the relation of irritation and chronic inflammation to epithelial cancer. [Brit. Med. Assoc.] "Brit. Med. Jour.," Sept. 4, 1880.
5. Gamgee, S.—Clinical lecture on the essentials of wound treatment. "Lancet," Sept. 4, 1880.
6. Lister, J.—Remarks on micro-organisms: their relation to disease. "Brit. Med. Jour.," Sept. 4, 1880.
7. Bryant, T.—Some notes on surgical fever after operations. "Lancet," June 5, 1880.
8. McVail, J. C.—Ten years' surgery in the Kilmarnock Infirmary. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.
9. Strejcek, J.—Ueber die Wundbehandlung. [Wissensch. Verein d. k. k. Militärärzte in Wien.] "Militärärzt," June 11, 1880.
10. Rosenberger.—Ueber das Einheilen unter antiseptischen Cautelen und über das Schicksal vollständig abgetrennter Gewebsstücke. [Deutsch. Gesellsch. f. Chir.] "Med.-chir. Centr.-Bl.," July 30, 1880.

11. Tillmanns, H.—Die feineren Vorgänge bei der antiseptischen Wundheilung. [Vers. deutsch. Naturf. u. Aerzte.] "Med.-chir. Centr.-Bl.," Aug. 6, 1880.
12. Beatson, G.—On antiseptic sutures. "Glasgow Med. Jour.," Sept., 1880.
13. Greene, W. W.—Supplementary note on boracic acid. "Boston Med. and Surg. Jour.," Aug. 26, Sept. 9, 1880.
14. Maas.—Verwerthung der essigsauren Thonerde in der Wundbehandlung. [Vers. deutsch. Naturf. u. Aerzte.] "Med.-chir. Centr.-Bl.," Aug. 20, 1880.
15. Volkmann, R.—Darf ein Chirurg oder Geburtshelfer Leichenöffnungen vornehmen? "Centralbl. f. Chir.," June 26, 1880.
16. Riedinger.—Scharlach nach Wunden. "Centralbl. f. Chir.," July 10, 1880.
17. Ricklin, E.—Traumatisme et scarlatine. "Gaz. Méd. de Paris," Sept. 4, 1880.
18. Nicaise.—L'ischémie provisoire produite par la bande d'Esmarch et les hémorrhagies consécutives. [Assoc. Franç. pour l'Avancem. des Sci.] "Progr. Méd.," Aug. 28, 1880.
19. Wertheim, G.—Behandlung der Kongelationen. "Wien. med. Woch.," June 19, 1880.
20. Roberts, J. B.—Surgical activity in the treatment of head injuries. "Med. and Surg. Reporter," Sept. 4, 1880.
21. Morris, C.—Remote effects of injuries to the cranium. [Philadelphia County Med. Soc.] "Phila. Med. Times," Aug. 28, 1880.
22. Klare, A.—Zur Praxis der Transfusion des Blutes. "Deutsch. med. Woch.," Sept. 4, 1880.
23. Howe, J. W.—A successful case of transfusion of blood. "N. Y. Med. Jour.," Aug., 1880.
24. Gray, F. A.—Traumatic tetanus treated by chloroform inhalation; recovery. "Lancet," July 31, 1880.
25. Snow, H. L.—On a neglected symptom in breast-cancer. "Lancet," June 12, 1880.
26. Gross, S. W.—The diagnosis of tumors of the mammary gland. "N. Y. Med. Jour.," June, 1880.
27. Leisrink, H.—Ueber unblutige Amputation der weiblichen Brust. "Centralbl. f. Chir.," July 24, 1880.
28. Pousson, A., et Lalesque, F.—Étude clinique sur trois cas de luxation de la colonne vertébrale. "Rev. Mens. de Méd. et de Chir.," July, 1880.
29. Wood, J.—Remarks on the employment of double extension in cases of disease and injuries of the spine and pelvic joints. "Brit. Med. Jour.," June 5, 1880.
30. Bramwell, J. P.—On nerve-stretching as a remedy for sciatica. "Brit. Med. Jour.," June 19, 1880.
31. Credé.—Dehnung und Durchschneidung des dritten Astes des Trigeminus. [Deutsch. Gesellsch. f. Chir.] "Med.-chir. Centr.-Bl.," July 30, 1880.
32. Crocker, H. R.—A case of papillary growths in the course of nerves. "Med. Times and Gaz.," June 12, 1880.
33. Schaefer, F.—Grosses, breit mit dem Hüftgelenk kommunicirendes Hygrom der Bursa iliaca. Incision; Drainage. Rasche Heilung mit beweglichem Gelenk. "Centralbl. f. Chir.," July 3, 1880.
34. Macewen, W.—Clinical observations on the introduction of tracheal tubes by the mouth, instead of performing tracheotomy or laryngotomy. "Brit. Med. Jour.," July 24, 31, 1880.

35. Haslund, A.—Laryngologiske Meddelelser. Strubepolyper. "Hospitals-Tidende," April 28, 1880.
36. Ingals, E. F.—Treatment of diseases of the larynx. "Boston Med. and Surg. Jour.," Aug. 19, 1880.
37. Franks, K.—Chronic follicular pharyngitis. "Dublin Jour. of Med. Sci.," May, 1880.
38. Manley, T. H.—Infra-hyoid bronchotomy. "Med. and Surg. Reporter," Aug. 21, 1880.
39. Cohen, J. S.—Some clinical considerations on access to benign intralaryngeal neoplasms through external incisions, etc. "Arch. of Laryngol.," June, 1880.
40. Wieber, G.—Extirpation of the larynx. "Ann. of the Anat. and Surg. Soc.," June, 1880.
41. Gerster, A. G.—A case of unilateral excision of the larynx, pharynx, hyoid bone, and base of the tongue. Recovery. "Arch. of Laryngol.," June, 1880.
42. Manouvrier, L.—Extirpation complète du larynx, du pharynx, de la base de la langue, du voile du palais et des amygdales.—Guérison avec restauration complète naturelle de la deglutition et restauration artificielle du langage. Par le professeur Cav. Azzio Caselli, de Reggio-Emilia. Bologna, 1880. [Abstract.] "Ann. des Mal. de l'Oreille," etc., Sept., 1880.
43. Wölfler.—Ueber die operative Behandlung des Zungenkrebses. [Dtsch. Gesellsch. f. Chir.] "Med.-chir. Centr.-Bl.," Aug. 27, 1880.
44. Justi, G.—Die Verwendung des Quellmeissels bei Erkrankungen der Nasenhöhle and des Nasenrachenraumes. "Wien. med. Woch.," July 17, 1880.
45. Lannelongue.—Corps étrangers de l'œsophage chez les enfants. [Soc. de Chir., Paris.] "Gaz. Méd. de Paris," June 12, 1880.
46. Castex, A.—Note sur un cas de périœsophagite. "Ann. des Mal. de l'Oreille," etc., Sept., 1880.
47. Krabbel.—Zur Operation der Ranula. "Centralbl. f. Chir.," Sept. 11, 1880.
48. Rawdon, H. G.—The operative treatment of cleft palate in children. "Brit. Med. Jour.," June 19, 1880.
49. Elias, C. — Ueber Gastrotomie. Zur Anlegung einer Magenfistel. "Dtsch. med. Woch.," June 19, 1880.
50. Herff.—Gastrotomy performed to establish a permanent fistula in stricture of the œsophagus. "New Orleans Med. and Surg. Jour.," July, 1880.
51. Millard et Tillaux.—Gastrotomie pratiquée sur un homme de 31 ans, qui avait présenté des phénomènes singuliers. [Acad. de Méd., Paris.] "Gaz. Méd. de Paris," Aug. 21, 1880.
52. Browne, J. W.—Notes upon a few cases of hernia. [Ulster Med. Soc.] "Dublin Jour. of Med. Sci.," July, 1880.
53. Swasey, E.—Hernia in children; based on a study of five hundred cases under personal observation. "Am. Jour. of Obstet.," July, 1880.
54. Terrier.—Du taxis dans la hernie étranglée. [Soc. de Chir., Paris.] "Bull. Gén. de Thérap.," May 30, 1880.
55. Johnston, G. B.—Dowell's operation for hernia illustrated by three cases successfully treated. "Va. Med. Month.," Sept., 1880.
56. Kocher.—Zur Methode der Darm-Resektion bei eingeklemmter gangränöser Hernie. "Centralbl. f. Chir.," July 17, 1880.
57. Gosselin.—Variété insolite d'obstruction intestinale ayant nécessité l'entérotomie. [Leçon.] "Gaz. Méd. de Paris," May 29, June 5, 1880.

58. Barié, E., et Du Castel.—Épithélioma cylindrique de l'S iliaque, ayant produit des phénomènes d'étranglement interne.—Laparotomie.—Étude sur le diagnostic différentiel entre le cancer de l'intestin et le volvulus. [Soc. Anat., Paris.] "Progr. Méd.," July 3, 1880.

59. Labbé, L.—Des indications de la création d'un anus contre nature et principalement d'un anus lombaire. "Gaz. Hebdom.," June 4, 18, 1880.

60. Verneuil.—Corps étrangers du rectum; extraction par la laparotomie; guérison. [Soc. de Chir., Paris.] "Bull. Gén. de Thérap.," May 30, 1880.

61. Van Buren, W. H.—On prolapsus ani. "N. Y. Med. Jour.," Sept., Oct., 1880.

62. Kehrer, F. A.—Eine neue Methode der operativen Behandlung des Mastdarmvorfalls. "Dtsch. med. Woch.," Aug. 14, 1880.

63. Allen, D. P.—Fistula in ano. The results of incision in thirty-six cases, with anatomical remarks. "Boston Med. and Surg. Jour.," July 29, 1880.

64. Terrillon.—Fistules ano-vulvaires ou périnéales. [Assoc. Franç. pour l'Avancem. des Sci.] "Progr. Méd.," Aug. 28, 1880.

65. Pollock, G.—Observations on the treatment of hæmorrhoids by "crushing." "Lancet," July 3, 1880.

66. Bodenhamer, W.—The ligation of hæmorrhoidal tumors. "Med. Record," Aug. 7, 1880.

67. Vance, R. A.—A case of obscure disease of the rectum. "Med. and Surg. Reporter," Aug. 14, 1880.

68. Lücke.—Entfernung des N. vagus mit einer Halsgeschwulst. Heilung. "Centralbl. f. Chir.," Sept. 4, 1880.

69. Rigal et Vignal, W.—Sur la formation du cal. [Acad. des Sci., Paris.] "Gaz. Méd. de Paris," June 12, 1880.

70. Southam, F. A.—Fat-embolism in fractures; with notes of a case. "Lancet," July 10, 1880.

71. Monod, E.—Fracture de l'os malaire.—Extirpation de cet os en totalité.—Guérison sans déformation apparente. [Soc. Anat., Paris.] "Progr. Méd.," July 3, 1880.

72. Markoe, T. M.—Fracture of the internal condyle of the humerus, with dislocation of the head of the radius. "Med. Record," July 31, 1880.

73. Allis, O. H.—Deformity from fractures at the lower end of the humerus, and how it may be avoided. "Ann. of the Anat. and Surg. Soc.," Aug., 1880.

74. Fowler, G. R.—Elbow-joint fractures. "Ann. of the Anat. and Surg. Soc.," Sept., 1880.

75. Pilcher, L. S.—The indications for treatment in fractures at the elbow. "Ann. of the Anat. and Surg. Soc.," Sept., 1880.

76. Allen, W.—On the anatomical changes induced at the elbow by luxation backward of the head of the radius in early life. "Glasgow Med. Jour.," July, 1880.

77. O'Neill, H.—Remarks on Colles's fracture, and its treatment with Professor Gordon's splint. [Ulster Med. Soc.] "Dublin Jour. of Med. Sci.," June, 1880.

78. Bennett, E. H.—On the characters and mechanism of the most common form of comminuted fracture of the upper third of the shaft of the femur. "Brit. Med. Jour.," June 26, 1880.

79. Delamare.—De l'épanchement intra-articulaire du genou, consécutif aux fractures du fémur. "Gaz. Hebdom," June 25, 1880.

80. Thomson, W.—Dupuytren's fracture of the fibula. "Brit. Med. Jour.," June 19, 1880.

81. **Brinton**, J. H.—The treatment of compound dislocation of the ankle-joint. "Phila. Med. Times," Aug. 28, 1880.
82. **Pletzer**, H.—Hydrops genu intermittens. "Dtsch. med. Woch.," Sept. 11, 1880.
83. **Secher**, O.—Om Hæmarthrus Genus og den Behandling med Punktur. "Hospitals-Tidende," July 7, 1880.
84. **Watson**, B. A.—The proper period for the performance of amputation in cases of traumatic injuries. "Gaillard's Med. Jour.," July, 1880.
85. **Gross**, S. D.—Successful amputation at the hip-joint for sarcoma of the thigh. "Phila. Med. Times," July 17, 1880.
86. **Kraske**, P.—Ueber die Carden'sche (transkondyläre) Amputation des Oberschenkels. "Centralbl. f. Chir.," Aug. 28, 1880.
87. **Larger**, R.—Des causes de la déformation du moignon à la suite des amputations du pied en général; anatomies des gaines synoviales tendineuses du pied. "Rev. Mens. de Méd. et de Chir.," Sept., 1880.
88. **Stimson**, L. A.—On simultaneous ligation of the common carotid and of the subclavian in its third portion, in the treatment of supposed aneurism of the arteria innominata, with a case. "Am. Jour. of the Med. Sci.," July, 1880.
89. **Dujardin-Beaumetz**.—Sur le traitement des anévrysmes de l'aorte par l'électropuncture. "Bull. Gén. de Thérap.," July 15, 1880.
90. **Cruveilhier**, E.—Ligature des deux carotides primitives. [Soc. de Chir., Paris.] "Progr. Méd.," June 26, 1880.
91. **Irwin**, F.—Case of "rodent ulcer." Ligature of carotid artery. Recovery. "Boston Med. and Surg. Jour.," June 24, 1880.
92. **Lange**, F.—Extirpation of kidney. Death on the fourth day after the operation. "Med. Record," Aug. 7, 1880.
93. **Czerny**.—Exstirpation der Niere. [Dtsch. Gesellsch. f. Chir.] "Med.-chir. Centr.-Bl.," July 30, 1880.
94. **Czerny**.—Nierenexstirpation. [Vers. dtsch. Naturf. u. Aertze in Baden-Baden.] "Med.-chir. Centr.-Bl.," Aug. 27, 1880.
95. **Day**, W. H., and **Thornton**, J. K.—Antiseptic nephrectomy for hydronephrosis of the left kidney in a young child; recovery. "Lancet," June 5, 1880.
96. **May**, E. H.—A case of litho-nephrotomy. "Lancet," July 3, 1880.
97. **Fieber**, C.—Ueber den sogenannten schnellenden Finger (doigt à ressort). "Wien. med. Blätter," 14, 15, 16, 17, 1880.

1. Mr. Savory deals with the question of *constitutional disturbance* with that apparent graceful ease which covers much hard work on one of the deepest questions in surgery. Of late, it has become evident that this familiar expression is too comprehensive, and covers widely different states, of which two principal ones require to be carefully distinguished. The author does not abandon the old theory of nervous influence in the production of constitutional disturbance; but he thinks it in danger of being forgotten in the light of the newer one of blood poisoning, and his ground is, that both forms of disturbance occur, and that, though they are often confounded, it is possible and important to distinguish between them in every case. In all animals possessing separate organs, it is essential to health that the different organs work in harmony. By this harmony they are enabled to minister to the common end—the life of the individual. They must be so related that the state of any one organ must be recognized by, in order that it may influence, the rest. This coördination of parts is well expressed by the word sympathy. We say of all animals which consist of separate parts, that there is, as a necessary condition of their welfare, a sympathy between the parts or organs which compose

them. In man, this sympathy is carried to the extreme; and in him it is difficult to select illustrations of it, only because they are so manifold. Who needs to be reminded of this relation between the uterus and the mammæ; between the testicles and the larynx; between the skin, the lungs, and the kidneys; or between the eyes? Although all organs are not thus intimately connected, there is no sharp line of demarkation between those which are and those which are not. The sympathy exists in all degrees. By what means is it established? That it is by means of the nervous system, is familiar to all. In the lowest and simplest forms of life in which a nervous system can be found, this appears to be its only function. As the special arises out of the general, and particular portions of the nervous system become endowed with particular functions, this internuncial office, as it has been well termed, is still the most general one; until, in man himself, where special nerve-centers attain a position of supreme importance, this, the earliest and ever the widest of the functions of the system, still prevails. But there is another means of sympathy even more universal, more subtle, and more obscure in its operation—the blood. The blood is the medium of communication between all parts, by virtue of the incessant changes going on between it and the tissues in nutrition. It is not hard to understand that, if any part fails to withdraw from the blood its own proper materials, or restores to the blood substances other than those which are the normal result of the changes it undergoes, the blood must, thereby, be in some measure, and for some time, abnormally affected. Hence, as a secondary result, the nutrition of other and perhaps remote parts or organs may, in various degrees, through this altered blood, become modified or disturbed. It would be difficult to estimate unduly the part thus played by the blood as the outcome of its great office. The application of these leading facts in physiology to some of the leading facts in pathology is obvious. We may well speak of constitutional disturbance through the blood, seeing in what terrible forms the affection known as blood poisoning presents itself. In the worst examples the blood is so changed, physically and chemically, that it kills before there is time for secondary effects to supervene; and in cases where the intensity of the mischief is below this, but still in high degree, the evidence is yet more striking, not only in the overwhelming constitutional disturbance, but also in the various local effects found scattered over the body. In these cases the poison may be said to be introduced from without. It gains entrance to the blood as something foreign to it; and this is really the case, not only where it is formed upon the surface of open wounds, but even when it is generated among the tissues, deep in the body, far away from any source of direct contamination by external agents. From these cases we may pass by insensible gradations to others, where, by what must be regarded as some morbid state of the process of nutrition, or some perversion of the changes between the blood and the tissues, the blood itself becomes damaged, and so potent for evil. The constitutional disturbance which attends many instances of what, so far as we can tell, is strictly local inflammation, must surely be of this kind. Between these cases of fever produced by local morbid action, or some form of perverted nutrition, and the instances of blood poisoning by matter derived from without, it is not at present practicable to draw a line. The question of blood poisoning has, however, been so much studied of late as to thrust the other almost entirely into the shade; but constitutional disturbance, as an affection wrought through the nervous system, claims still to stand. Every one is familiar with instances of local sympathy through the nervous system—pain in the glans penis from vesical calculus, pain in the testis from renal calculus, etc. In these instances it may be remarked that often there is more pain and distress in the part disturbed through sympathy than in the part first affected. Furthermore, Hunter pointed out that such local sympathies were often not reciprocal. The liver, he says, never sympathizes with the shoulder, nor the urethra with the testis; nor, when the glans penis is affected, does any irritation pass to the bladder; but often they are reciprocal, as, for example, between the head and the stomach. The clinical features of each of these varieties of constitutional disturbance may generally be distinguished. In both there is usually pyrexia. The temperature is raised, the circulation and respiration are hurried, the secretions disordered, the tongue and breath foul. The patient complains of headache and various other pains, and of thirst. All these signs or effects are, as a rule, common to the two forms of mischief. But, beyond these, in the more active forms of blood poisoning, there are added the remarkable phenomena of rigors, with great and sudden rise of temperature, followed by profuse perspiration, and, if the case lasts long enough, usually by evidence of mischief in various parts in the way of congestion, inflammation, and suppuration. Even in the milder and more chronic instances of the affection, these striking signals are displayed from time to time; and, in the graver cases of blood poisoning, all the symptoms, even those common to the other kind of constitutional disturbance, are more marked, and the progress of the case is far more rapid. In one form it may be said that the patient is rapidly destroyed; in the other, that he is slowly worn out. Therefore when fever, which must be of one or other of these two forms, is encountered, the diagnosis of blood poisoning of the worst kind can hardly be doubtful nowadays. But in practice the question is not always so simple as this. It is very frequently complicated by the fact that both causes of disturbance are simultaneously at work in the same case. It is easy to see how the same local mischief that leads to the formation of unwholesome fluids will produce irritation of the nerves, and hence the fever which appears will be the result of these two affections in ever-varying degree; and, furthermore, when only one of these two causes is in operation at the onset, it must tend, sooner or later, to induce the other. But, although this combination necessarily occurs as a rule, no doubt, in some measure, nevertheless, in the vast majority of cases, one of these two great forms of constitutional disturbance stands out from the other so marked in its features that, practically, it may be considered as the single source of mischief.

5. As if to answer Lister's article on "micro-organisms," in the "British Medical Journal," Mr. Gamgee relates a number of interesting cases exemplifying what he considers *the essentials of wound treatment.* Among other cases, he reports the following, which we will briefly abstract. A boy, aged fifteen, had a wound two inches long just on the outer side of the left patella, which was exposed, as were also the external lateral ligament, the outer condyle of the femur, and the corresponding tuberosity of the tibia. There was free escape of synovia and blood. The wound was inflicted by the cog-wheel of a steam-printing press in motion. The edges of the wound were brought together with three points of silver suture; the knee was covered with dry pads of pure absorbent gauze and cotton; and with the aid of pasteboard splints the limb was immobilized with a compressing bandage. The lower end of the bed was raised six inches, and a "sand-and-water pillow" was placed under the limb to insure perfect quiet. The wound into the knee-joint closed thoroughly by first intention, although a purely superficial sore resulted from the sloughing of the contused skin. The temperature was high on several occasions, but there was never any redness of the skin or puffiness of the joint. The patella throughout was well defined and movable. Mr. Gamgee says he has never seen recovery from so formidable an injury with less complication, and that its study helps to form a just estimate of what constitute

the *essentials* of wound treatment. They are, accurate coaptation and absolute rest, to which position and pressure are eminently conducive. As a rule, the dressing should be dry and not frequently changed, and drainage should be adapted to circumstances.

In directing attention to a group of cases successfully treated on demonstrably sound principles of physiology and surgery, he has expressly avoided entering upon a controversy which has for some time divided the surgical world. Disputations, he remarks, may be more interesting than profitable; they often do much toward unveiling the truth, but they not unfrequently obscure it. The adage that many roads lead to Rome finds abundant illustration in surgical practice. Pin your faith to no master; be a slave to no system. The scheme of Nature is broad and comprehensive; truth is catholic and many-sided. Our chances of interpreting it rightly and practicing it safely will be enhanced in proportion as we keep our minds unbiased by theories and fashions, and strive to imitate Nature in methods and in means.

8. In the section on surgery, the question of *wound treatment* has again been under discussion in the British Medical Association. Mr. McVail gave the statistics of the last ten years at the Kilmarnock Infirmary with the dry dressing of wounds. The town is less healthy than Edinburgh or Glasgow, the patients are mostly from the mining and manufacturing classes, and the infirmary contains one hundred and twenty beds. In this treatment, the bleeding in cases of amputation is first carefully checked, no liquids are used, and lint spread with lard is the usual dressing. In compound fractures, blood-dressing is the favorite method. When the discharge is small in amount, the dressing is correspondingly infrequent; where large, it is necessary to change daily. In all, 1,488 patients were admitted, of whom 19 died within forty-eight hours in the wards, and 33 after a longer time—a total death-rate of 3·5 per cent. Dr. Cameron's death-rate in the Glasgow Royal Infirmary, with antiseptic treatment, was 5·1 per cent., and a comparison was made between the statistics of the two modes of treatment, which resulted in almost every class of cases unfavorably for antiseptic surgery in the hands of Mr. Lister himself. In fact, the whole tenor of Mr. McVail's paper was to prove that better results had been obtained without antiseptics than Mr. Lister had ever obtained with them. Mr. Lister, in reply, said that, if such results could be got everywhere, there would be no need of antiseptic surgery; but he feared such would not be found the case. Mr. Erichsen was especially interested in Mr. McVail's paper because it went directly to the heart of the practical surgeon. The treatment advocated was that to which he had been accustomed in his early professional life, from which he had seen the very best results, and which had been adopted by the late Mr. Liston. He knew of no treatment preferable to it where one was removed from the great centers where all surgical appliances can be procured. There was another point that interested him in the paper; and that was, that union by the first intention was not exactly a modern invention. The world owed much to Mr. Lister for the introduction of antiseptic surgery, although he confessed to being somewhat staggered when he heard that under the word antiseptic was now to be included every possible hygienic and other precaution taken in the hospital, even to the exclusion of unfit cases for operation. Used in this sense, the word simply lost all significance. With regard to the three essentials of antiseptic treatment—the spray, the gauze, and drainage—he discarded the two first, but held to the last. The long series of cases just reported by Mr. McVail, his own experience, and that of every other surgeon who had had opportunities for judging, the fact, as in hare-lip, that primary union might be obtained without it, all convinced him that the use of the spray

was not a necessity; and he knew it to be a great inconvenience in many operations. As to covering the wound, he believed it was not so important for the exclusion as for the filtering of air, and he had seen the best results for years past from the employment of the dry dressing. But were germs really likely to be productive in many cases of much evil? There were two operations in surgery during which wounds were full of germs of the worst character—that for fistula in ano and lithotomy, and which were performed without evil results, notwithstanding the constant presence of such germs. But there was one most essential point, whether antiseptics were used or not, and that was drainage. The introduction by Chassaignac, about twenty-five years ago, of the perforated rubber tube constituted the greatest advance in the treatment of wounds which had been made in this century. With it, wounds would heal with almost any kind of treatment, provided a good deal of attention were given them.

12. Dr. Greene has been using *boracic acid* in his surgical practice for several years past, and is convinced that in it we have a drug of much greater power and wider range of applicability than the profession are aware. He has used it topically on old ulcers and a great variety of sores, both simple and specific in origin, with the result of always obtaining an immediate correction of unpleasant odor, relief of pain and itching, and improvement in the granulation process. An important fact in this connection is that, in all the cases treated, other plans of treatment had been fairly tried, or, as in a few cases treated by the acid applications from the first, were observed in comparison with similar ulcers which were being managed in some one of the time-honored methods. Under the influence of this remedy the tissues become better fitted for the reception and nourishing of skin grafts, while those that have taken but indifferent hold, and give doubtful promise, brighten and quicken under the vivifying contact of boracic acid. In several fresh, open wounds of large area, he has followed the primary dressing of cotton-wool with the boracic-acid ointment and with most satisfactory results; and in simple catarrhal inflammations of mucous membranes, as well as in the ulcerative forms of disease associated with fetid, muco-purulent secretion, the effect of boracic-acid solutions has been most gratifying. In ozæna and otorrhœa, he has proved its qualities as a prompt deodorizer and healthful alterative, and as a lotion for washing out the bladder in chronic cystitis, with muco-purulent and offensive urine, he knows of nothing better. In twenty-eight cases of gonorrhœa it has given excellent results, also in cases of vaginitis and inflammation of the external genitals in females. In true diphtheria, where he has relied upon it as a local remedy, he has been satisfied with its results; and in diphtheroid and aphthous inflammations of the fauces he has convincingly tested its action and demonstrated its value. In the form of a lotion or ointment, it has proved efficient in erythema and facial erysipelas, as well as in eczema and the various forms of tinea. Internally, the drug has been used in diphtheria, chronic dyspepsia with fetid eructations, in chronic cystitis, septicæmia, pyæmia, and rheumatism; and in all it has seemed to have a beneficial effect. In preparing the drug for external use, it has been found that hot glycerine dissolves a little more than three drachms to the fluidounce, and holds it perfectly on cooling. Vaseline, cold or hot, does not affect the acid, but at a high temperature unites readily with the saturated glycerite, and the union remains perfect on cooling, without any precipitation. The author knows no limit to the dose for internal administration. It is a curious drug. Locally, although so decided an antiseptic and powerful alterative, yet a saturated watery solution does not in the least irritate a fresh cut surface. Nor does the same solution, which is almost tasteless, having only the slightest saline flavor with a suspicion of acidity, in any way disturb the stomach. He has repeatedly given four fluidounces of the saturated solution at a dose, containing about eighty grains of the acid, and in several instances patients have taken much more. No ill effects have ever been seen. The author's ordinary dose for an adult is from twenty to thirty grains, but, when prompt saturation of the system is desired, one or two drachms may be given every four hours. In foul sores, simple or specific, whether ulcers or eczematous surfaces, the parts are kept soaked in the aqueous solution, or, if very foul or unhealthy, in the saturated glycerite of boracic acid, for a few days, until the surfaces become clean and free from foul odor. They are then dressed with boracic ointment.

In a supplementary note Dr. Greene calls attention to one or two other facts. Fresh meats, butter, vegetables, etc., may be perfectly preserved for an indefinite length of time by simply covering them with cloths wet in a solution containing only ten or fifteen grains of the acid to the ounce of water; and this fact he thinks worthy of attention when it is remembered that the acid is innocuous, odorless, and practically tasteless. He has also used the acid in combination with salicylic acid, both internally and externally, but is not prepared to claim any advantages from such union in any case. Certain rules are also added for the better preparation of the ointments. The whole article is calculated to call out further experiment and research, and perhaps to add an important antiseptic to those already in common use in surgical practice.

15. Volkmann answers the question *whether a surgeon or an obstetrician may make autopsies* in the affirmative, but with many restrictions. It is evident that the infection material can do no good in a wound, and therefore a general surgeon should not come in contact with ulcers, wounds, sensitive mucous membranes, as those of the eye or urethra, or make vaginal examinations of pregnant or puerperal women, until a suitable time has elapsed since an autopsy, or until he has carefully disinfected himself and the instruments he employs. Since 1873 no diseases arising from accidental wound poisoning have appeared in his own clinic. Since that time every nurse and assistant has submitted to careful disinfection before touching any breach of surface, no matter how trifling. All sounds used for exploration, and even scissors used for cutting sutures in wounds not treated antiseptically, are first disinfected. During this period, the slighter forms of phlegmon have entirely ceased, and erysipelas is only rarely seen in its so-called spontaneous form. He says that visitors going through his wards and seeing recent wounds on the face treated by the open method, without any inflammatory action being visible, have remarked that the wards must be so entirely carbolized that all wounds heal readily; or that such cases show what good results may be obtained by the old method. Both conclusions he believes incorrect, for all the cases were treated on the antiseptic plan, with the exception of the occlusion dressing; and he does not believe a whole hospital can ever be carbolized. In every case, in every part of every operation, the causes of putrefaction are excluded. So thoroughly are his best nurses imbued with this idea, that they disinfect the scissors with which they cut off the plaster bandage from a simple fracture. His own practice is to use a five-per-cent. solution of carbolic acid freely for washing purposes. He does not consider it necessary to go to the extent of changing the linen; but, for operations and dressings, both he and his assistants put on white linen coats, and of these he often uses three or four for himself of a morning. He discards the old cloth operating gowns often seen, and does not approve of the water-proof sleeves and aprons. By this means he is enabled to deliver his course on operative surgery from six to eight o'clock in the morning, during which his hands are constantly in the blood and fluids of fresh and putrid subjects, and then occupy himself immediately with operations and fresh wounds without carrying infection.

He thinks it much better to disinfect a visitor and dress him in a fresh, clean gown, than to trust to his assertion that for a certain number of days he has not been exposed to putrid influences. If it were not possible to thus rapidly and yet thoroughly purify one's self, it would be necessary to establish special stations and special assistants for all patients whose wounds were not completely aseptic in character; for every surgeon is liable to be called from a foul wound or a septic inflammation to give immediate attention to some case particularly susceptible to septic influences. At first, he felt great anxiety on this point; the bad cases were all isolated, and their dressings were postponed till the last, and, after having finished, Professor Ranke, then his assistant, took a bath and changed all his clothes. Now the only cases isolated are erysipelas, diphtheria, and the like. Where he has a long series of operations, he begins with those in which the danger of infection is greatest, and ends with those already suffering from septic diseases. First he opens a peritonæum, then removes a loose body from the knee, then excises diseased joints, and finally comes to the acute progressive phlegmon.

Should an obstetrician permit students, who a few hours before have been engaged on dead bodies, to make vaginal examinations of puerperal women? Certainly not, if he is not in a position to assure himself whether and in what way they disinfect themselves, and unless they change their coats. Medicine has become, during the last decade, more and more a handicraft, or rather an art. The time will soon end when practitioners will only write prescriptions as *medici puri*. To the implements the practitioner must carry about with him must now be added a small bottle of carbolized glycerine.

28. Drs. Pousson and Lalesque give a clinical study of three cases of *luxation of the spinal column*, from which the following conclusions are drawn. The accident may by its violence cause instant suspension of cerebral activity, shown by loss of speech and consciousness. The spinal troubles are, however, much more important, and consist in paralysis of movement in the parts supplied from below the injury—although certain muscular groups may preserve their integrity—and in loss of sensibility in the same parts. If the cord has been injured in its whole thickness, the loss will be complete. Very marked hyperæsthesia, and even subjective pains, are observed at the limits of the affected zone. In one case only was the reflex action of the cord increased. Contraction of the pupil and immobility were observed in two of the cases where the injury was at the lower end of the cervical region. Turgescence of the penis was observed in three cases, also loss of power over the bladder; the urine was generally normal in quantity and in quality. The paralysis of the bowels was shown by the development of tympanites, and by involuntary passages. The respiration was diaphragmatic, and there was paralysis of the intercostal muscles and of those of the abdomen. The heart-beats were not increased in number, although the vaso-motor paralysis caused decrease in the arterial pressure, and therefore a change in the character of the pulse. No definite conclusions were drawn regarding the temperature, because of the shock and subsequent inflammation. Trophic troubles were observed in only one case.

34. Dr. Macewen, in an article on *the introduction of tracheal tubes by the mouth instead of performing tracheotomy or laryngotomy*, gives several cases in which he has adopted this measure with good results. He believes that tubes may be passed through the mouth into the trachea, not only in chronic but in acute affections, such as œdema glottidis, and this, with a little practice, without administering an anæsthetic. The respirations may be carried on perfectly through them, the sputa can be expelled through them, and deglutition can be carried on while the tube is in its place. Though the patient at first suffers from painful sensations, these soon pass off, and the presence of the tube creates little disturbance, the patient being able to sleep with the tube *in situ.* The tubes were harmless in the cases he gives, and the ultimate results of the treatment were rapid, complete, and satisfactory. Such tubes may be introduced in operations on the face and mouth, to prevent blood from running into the trachea, and for the purpose of giving an anæsthetic, and answer the purpose admirably.

39. Dr. Cohen, in an able paper on the *proper surgical procedures for gaining access to benign intra-laryngeal neoplasms through external incisions*, endeavors to lay down general principles which should guide the operator in his choice of incision. By far the greater number of such growths may be removed by laryngoscopic methods; but in exceptional instances, peculiar circumstances of situation and magnitude of growths, or of age, vigor, and tractability of patients, external incisions may be imperative. The external operations from which the surgeon may choose are: section of the middle crico-thyroid ligament; section of the thyroid cartilage in the median line; section of both cartilage and ligament; section of the entire larynx; and section of the thyro-hyoid membrane. Section of the cricoid cartilage should be avoided when possible, as it may be followed by necrosis of the cartilage or by impairment of the solidity of the laryngeal skeleton. Section of the thyroid cartilage may also be followed by unsatisfactory agglutination of the anterior portions of the vocal cords in cicatrization, and subsequent impairment of the voice, giving it a shrill accentuation from the resulting shortening. Section of the middle crico-thyroid ligament should always be chosen in preference to all others when the size and situation of the growths are such as to offer a prospect of success. This operation is the simplest of the series, involves a minimum risk, leaves but an insignificant external cicatrix, and does not impair the voice. It is readily performed; the opening permits satisfactory illumination; and in the adult the wound is large enough to allow of the introduction of the cannula, should it be necessary. It is indicated in public speakers and for the removal of growths which impair the voice, while they may not interfere with respiration. Section of the thyroid cartilage is liable to impair the voice irretrievably; it is therefore indicated to remove injurious neoplasms which can not be removed by simpler methods. It is usually practiced after preliminary tracheotomy, either immediately preceding or done some time in advance; and, when not affording sufficient room, the incision may be extended through the whole larynx. Section of the trachea is only done with the object of operating on a growth immediately through the tracheal incision, or as a preliminary step to one of the operations directly upon the larynx itself, to insure safety from asphyxia. Section of the thyro-hyoid membrane (sub-hyoid pharyngotomy, supra-thyroid laryngotomy) may be practiced for direct access to a neoplasm. Clinical experience is too meager to indicate its real value. Morell Mackenzie long ago asserted that the cases which could be reached by this operation were just the ones most suitable for laryngoscopic methods, and this experience would seem to be verified by experiments on the cadaver and by the results of cases so far recorded.

42. The following case of *complete extirpation of the larynx, pharynx, base of the tongue, tonsils, and vault of the palate* was reported by the operator, Dr. Cav. Azzio Caselli, at a meeting of the Medico-Chirurgical Society of Bologna, December 7, 1879. The patient was a girl of nineteen years, anæmic, delicate, who had not as yet menstruated, suffering from an epithelioma of the larynx, pharynx, vault of the palate, and base of the tongue. She was obliged to close the nares with the fingers in eating and drinking; she breathed with great difficulty, and was subject to fits of suffocation, which were so severe as to be dangerous. There was general wasting from insufficient nourishment.

The operation was begun by making a small opening with the galvanic cautery knife in the median line of the neck, at a point corresponding to the third, fourth, and fifth tracheal rings. The trachea was opened at this point, the opening was enlarged with Laborde's dilator, and the cannula tampon of Trendelenburg was introduced, through which the anæsthetic was administered during the subsequent course of the operation. An incision was made in the median line from the opening into the trachea up to the lower border of the body of the lower jaw, and carried to a sufficient depth to expose the thyroid cartilage. The thyroid gland was removed, and all the anterior surface of the thyroid and cricoid cartilages was uncovered. The larynx was surrounded with the fingers, and all its connections with the hyoid bone were divided with the galvanic cautery wire. The thyroid cartilage was then raised from its bed, isolated from the surrounding tissues, partly with a bistoury and partly with the galvanic cautery knife, and detached from the cricoid cartilage, which the operator wished to preserve, believing it still healthy. It was, however, found to be involved, and was detached and severed from the trachea at the first interannular space. Before making the section, two ligatures were attached to the trachea to prevent its retracting too far into the root of the neck. It was next necessary to divide the hyoid bone for the sake of enlarging the incision and determining the extent of the neoplasm. Up to this time only two ligatures had been employed, and these were of catgut and applied to the superior thyroid arteries. The position of the carotids was made out from time to time with the fingers, in order to keep them out of the way of the knife. The pharynx was isolated and divided at its point of junction with the œsophagus, a ligature being passed through this also to prevent its retraction. At this point the patient ceased to breathe, and artificial respiration was begun. It was suggested that the stoppage of respiration was only preparatory to efforts at vomiting produced by reflex irritation from the divided œsophagus, and this proved to be the case. After the vomiting had ceased, a portion of the base of the tongue and of the epiglottis was removed with the galvanic cautery. The next step in the operation consisted in keeping the mouth open by means of an American instrument, and through it incising all the soft palate, the upper portion of the pharynx as far as the level of the posterior nares, the constrictors of the fauces, the tonsils, and the last adhesions of the pharynx; after which all the neoplasm was extracted through the wound in the neck. This ended the bloody part of the operation, which occupied three hours and ten minutes. About fifty grammes [less than two ounces] of blood were lost. The patient was fed with wine through an œsophageal tube, and, being asked if she had suffered, answered in the negative by a shake of the head. She put out her tongue when desired to do so —a thing which was scarce hoped for, in spite of the care taken to preserve the motion of the organ. The wound was dressed antiseptically. The cannula for respiration was adjusted as usual after tracheotomy, and a light gauze was placed over its orifice to modify the entrance and exit of air, and prevent access of foreign bodies; and the patient was confided to the care of students, who watched her in turn day and night. Food was injected regularly through the sound. The œsophagus, which was held up in its place by strings passed over the ears, united well in its position, as did also the trachea. The dressing of Lister was renewed daily, and on the fifteenth day the patient left her bed. At the end of a month she was able to swallow both solids and liquids without the use of the œsophageal tube—and this without any return through the nose. An ingenious apparatus was constructed by M. Romualdo Caffari, a mechanician, by which, when the patient was presented to the Academy at Bologna, she was able to converse intelligibly and continuously.

46. We gather from the interesting article of M. Castex on *periœsophagitis* the following points. The affection may be acute or chronic, and may be situated either in the cervical or in the thoracic portion of the tube. It frequently begins insidiously and is difficult to diagnosticate, especially when spontaneous and not traumatic in origin. The most constant symptoms are the dysphagia and the pain behind the sternum on deglutition. This pain sometimes extends the whole length of the tube. The pus, once formed, seeks the exterior, generally perforating the œsophagus, but sometimes following a circuitous route. The affection may be confounded with œsophagitis. In the latter, deglutition is painful but possible; in the former, it may be absolutely impossible, all sliding motion of the œsophagus being prevented. In retro-pharyngeal abscess the neck is stiff and the head immovable, which is not the case in periœsophagitis. The latter may be confounded with a latent pericarditis. The patient sometimes resembles one suffering from rabies—having dysphagia, hallucinations, a fixed look, etc., with even a fear of water. Catheterism of the œsophagus, which is justified only in the absence of acute symptoms, does not always give exact results. The bougie may be passed with comparative ease where deglutition is impossible. The prognosis is variable. The traumatic variety is the least dangerous; the spontaneous often indicates a grave general state. In some cases œdema glottidis may be a complication. The treatment consists in giving food easy to swallow, in carefully watching the general state of the patient, and the points at which pus is liable to appear in the neck. Antiphlogistics and alteratives may be employed. Alimentation should be carefully watched, lest danger arise from attempting to swallow large masses of food, especially where there exists a wound of the œsophagus, as fatal accidents have occurred from this cause. The author reports one case very carefully and minutely, and gives the literature of the subject and references to other cases.

48. Mr. Rawdon has adopted a modified *operation for fissure of the palate in children*, which consists in closing, at the first operation, only the lower portion of the cleft, and leaving the remainder to close spontaneously or for a subsequent operation. He contents himself with uniting the margin of the fissure only so far forward as can be done without traction—that is to say, for about the lower two thirds or three quarters of the velum. The soft palate in the vicinity of the uvula is thick and vascular, and therefore offers facilities for union by first intention which no other part of the palate possesses, and he believes that, if the cleft be closed to the extent mentioned, a successful result may be regarded as certain. By following this course, the operation is simplified, and the inflammatory action is proportionately less than when the closure of the whole cleft is attempted. When the soft palate, or the lower portion of it, has united, it readily accommodates itself to its new position and is free from tension, the improvement of its condition being well marked and progressive during the first few weeks. He believes that, if the surgeon contented himself with uniting only the lower two thirds or so of the soft palate, and waiting a reasonable time for it to accommodate itself before completing the cure, there would not be much danger of the accidents which are liable to render these operations of little practical avail, arising from the excess of tension. The opening formed by leaving the palatine portion of the fissure unclosed has a tendency to diminish spontaneously, and its subsequent closure is not attended with difficulty. Lateral incisions and the use of the raspatory are needful, as it is essential that the vivified margins of the opening should come together without the least tension. When extensive fissure exists, whether up to the intermaxillary bone or through the alveolar process, he still prefers only to close the velum at the first operation, and to allow a sufficient interval to elapse before closing the hard palate. The operation is described in detail, and a series of successful cases is reported.

59. Dr. Léon Labbé, in pointing out the *indications for the establishment of an artificial anus*, and especially one in the lumbar region, is inclined to favor the operation early in cases of cancer of the rectum. The point is an important one in surgical practice, and one upon which there is considerable diversity of opinion. As he says, there are two things to be done when a surgeon finds himself in the presence of a cancer of the rectum; one is a radical operation, consisting in removal, and the other a palliative measure, consisting in the formation of an artificial anus. There are also many other things which the author does not refer to, which, as palliatives, may answer as well as the latter. If the disease is situated too high in the bowel to be reached, or if it has so involved the surrounding parts as to make its speedy return probable, there can be no question of removal, and the surgeon devotes himself solely to the relief of suffering and to prolonging life. The same is perhaps the case in complete obstruction (certainly when the obstruction is above the reach of the knife); but, where complete obstruction has not yet occurred, though there may be great suffering, the time of operation is left to the judgment of the surgeon in each particular case, some preferring an early and some a later interference. The author's experience in exsection of cancer of the rectum has not been such as to lead him to regard the operation with great favor; and he therefore advises not only that colotomy should be done in nearly all cases of cancer, but that it should be done early—the earlier the better, as giving ease and prolonging life. The ground is well taken, and may in the end be generally accepted as the rule of surgery, but it has not as yet been so considered. Should the experience of the author with excision prove to be the general experience, his preference in favor of colotomy will be accepted by all. In eight cases he has excised the rectum, and in seven of them the immediate results were perfect, and the patients had reason to believe themselves cured. Two among them, whose general state was very bad, regained every appearance of health. One only succumbed, on the twelfth day, to peritonitis caused by the operation. *But* the average time before the return of the disease did not exceed ten months. In two cases a second operation (colotomy) was performed in consequence of obstruction. Not only were the results unsatisfactory, but the author is inclined to question whether the operative interference did not hasten the end. On these grounds, then, he considers that colotomy should not be ranked as a *dernier ressort*, but should be performed early, with the object not only of overcoming obstruction and relieving pain, but also of prolonging life by retarding the growth. In this he agrees with most American and British surgeons. In practice the point will depend upon the ultimate results of extirpation as regards cure, the length of life gained or lost by the operation, etc. We are not yet in condition to decide positively on these points.

68. Dr. Lücke gives a brief account of the accidental *removal of a portion of the right pneumogastric nerve*, twelve centimetres in length. A woman suffered from a recurrent tumor of the neck, which at first seemed easily removable, but was found adherent to the carotid sheath. The accident caused no untoward symptoms, and the patient made a good recovery, there being nothing noticeable about the respiration.

88. Dr. Stimson traces the history of *distal ligature for aneurism of the innominate*, from the time of its first suggestion by Brasdor to the present. He has collected, in all, seventeen cases, which he gives in tabular form, and from which he draws the following conclusions: (1.) Simultaneous ligation of the carotid and of the subclavian in its third portion, in cases of aneurism of the innominate, has been followed by complete obliteration of the cavity of the sac and of the entire length of the subclavian on the proximal side of the ligature; and in other cases, where the branches of the subclavian have remained pervious, consolidation has been so extensive as to leave only a small central channel, and the progress of the disease has been indefinitely arrested. The impossibility of placing a ligature upon the first portion of the subclavian is not, therefore, a weighty argument against the treatment of innominate aneurism by distal ligation; (2.) Two of the cases, IV and XIII, in which the aneurism was of the aorta instead of the innominate, and the successes obtained by Mr. Holmes and Mr. Heath in the treatment of aortic aneurism by ligation of the left carotid, diminish the objection arising from the difficulty of making a diagnosis; (3.) The operation deserves a position among surgical procedures of recognized gravity, but admitted propriety; (4.) Consolidation follows so slowly after the operation that the latter can do no good when the sac is inflamed or rupture is threatening; (5.) If the operation is undertaken when the aneurism is large or when the breathing is obstructed, no anæsthetic should be used.

89. Dr. Dujardin-Beaumetz gives two remarkable cases of the *treatment of aortic aneurism by electropuncture.* In the first, the man had kept his bed for nine months, was constantly under the influence of morphine injected hypodermically in daily increasing doses, and had arterial hæmorrhages which denoted a rapidly approaching termination. After five trials of the electropuncture, he was so far relieved that the hypodermic injections were reduced to half a syringeful a day, his general condition was remarkably improved, the tumor had greatly decreased in size and become firm and resistant, and the expansive pulsation had greatly diminished. In the second case also, the aneurism had reached the last stage; there was no sleep, but constant cough, intense dyspnœa, great pain, and daily enlargement of the tumor. After five applications, the pain had disappeared, the patient could rise and walk without difficulty, and was about to depart for his own country. Whether these results will be permanent, it is not attempted to decide, but they are sufficient to prove that by properly and carefully following this method of treatment relief may be obtained which no other method can give. The article contains a valuable analysis of one hundred and fourteen cases treated by this means, and the results as far as known. Of these, fourteen show an improvement lasting from one to five years.

QUARTERLY REPORT ON DERMATOLOGY.

No. III.

BY GEORGE HENRY FOX, M. D.,
CLINICAL LECTURER ON DISEASES OF THE SKIN, COLLEGE OF PHYSICIANS AND SURGEONS,
NEW YORK; PHYSICIAN FOR SKIN AND VENEREAL DISEASES TO THE
NEW YORK DISPENSARY.

1. MARTINI.—Ueber einige Formen von Hautkrankheiten. [Gesellsch. f. Natur- u. Heilk., Dresden.] "Dtsch. med. Woch.," June 5, 1880.
2. OLAVIDE.—El herpetismo. "Revista Esp. de Optal., Sifil., Dermat., y Afecc. Urin.," April, May, June, July, 1880.
3. GALLIARD, L.—Observation pour servir à l'histoire des lésions congénitales de la peau. Dermatome hypertrophique congénital pig-

mentaire, plan, généralisé. "Ann. de Dermat. et de Syphil.," July, 1880.

4. Cottle, W. — Congenital neurotic papilloma. [Brit. Med. Assoc.] "Brit. Med. Jour.," Sept. 4, 1880.

5. Quinquaud.—Note sur les affections cutanées d'origine rénale. "Tribune Méd.," June 20, 1880.

6. Vidal, E.—De l'urticaire. "Ann. de Dermat. et de Syphil.," July, 1880.

7. Bethune, G. A.—Eczema and its relations: a rambling sketch. "Boston Med. and Surg. Jour.," Aug. 5, 1880.

8. Vidal.—Du lichen planus et du lichen ruber. "Tribune Méd.," July 25, 1880.

9. Leloir, H.—Sur les altérations de l'épiderme dans les affections de la peau ou des muqueuses qui tendent à la formation de vésicules, de pustules, ou de productions pseudo-membraneuses. [Soc. Anat., Paris.] "Progr. Méd.," June 26, 1880.

10. Remy, C.—Phlyctènes de la peau. [Soc. Anat., Paris.] "Progr. Méd.," June 19, 1880.

11. Thin, G.—On the pathology of psoriasis. [Brit. Med. Assoc.] "Brit. Med. Jour.," Sept. 4, 1880.

12. Duhring, L. A.—Pityriasis maculata et circinata. "Am. Jour. of the Med. Sci.," Oct., 1880.

13. Vidal.—De l'ecthyma. "Tribune Méd.," June 20, July 4, 1880.

14. Hillairet.—Des acnés par rétention de matière sébacée. "Progr. Méd.," Sept. 11, 1880.

15. Renaut, J.—De l'acné varioliforme (molluscum contagiosum de Bateman). "Lyon Méd.," July 25, 1880.

16. Renaut, J.—Anatomie pathologique de l'acné varioliforme (molluscum contagiosum de Bateman). "Ann. de Dermat. et de Syphil.," July, 1880.

17. Thin, G.—On the cause of the bad odor sometimes associated with excessive sweating of the feet, with directions for treatment. "Brit. Med. Jour.," Sept. 18, 1880.

18. Ainsworth, F. C.—Treatment of fetid perspiration of the feet. "Med. Record," Oct. 2, 1880.

19. Carry.—Contribution à l'étude du xanthoma. "Ann. de Dermat. et de Syphil.," Jan., 1880.

20. Miller, W. J.—A case of general cirrhosis. "Trans. of the Med. Soc. of Tennessee," 1880.

21. Playfair, D. T.—Notes of a case of a rare form of elephantiasis. "Edinburgh Med. Jour.," July, 1880.

22. Hansen, G. A.—Bacillus lepræ. "Nordiskt medicinskt Arkiv.," xii, 1, 1880.

23. Milroy, G.—Is leprosy contagious? [Art. vii.] "Med. Times and Gaz.," Sept. 4, 1880.

24. Milroy, G.—Yaws: geography of the disease. "Med. Times and Gaz.," June 26, 1880.

25. Olavide.—Tiña favosa generalizada. "Revista Espec. de Oftal., Sifil., Dermat., y Afecc. Urin.," Aug., 1880.

26. Gamberini, P.—Tigne guarite nella clinica delle malattie veneree e cutanee di Bologna. "Giorn. Ital. delle Mal. Ven. e della Pelle," Aug., 1880.

27. Anderson, M'C.—On tinea imbricata, or Tokelau ringworm. "Edinburgh Med. Jour.," Sept., 1880.

28. Railliet.—De la teigne tonsurante chez les animaux. "Ann. de Dermat. et de Syphil.," April, 1880.

29. Mégnin.—Gale du chat, sa transmission au cheval, à la vache, et à l'homme; son origine. [Soc. de Biologie, Paris.] "Gaz. Méd. de Paris," June 5, 1880.
30. Eichhoff, J.—Ueber multiple kachektische Hautgangrän. "Dtsch. med. Woch.," Aug. 21, 1880.
31. Warlomont, E.—Remarks on the different methods of collecting, preserving, and employing animal vaccine. "Brit. Med. Jour.," Sept. 25, 1880.
32. Keirle, N. G.—Pathological histology of the vaccine crust. "Maryland Med. Jour.," Aug. 15, 1880.
33. Tafani, A.—Anatomia di alcune forme eruttive vacciniche modificate. "Lo Sperimentale," Aug., 1880.
34. Stokes, W.—A case of gangrenous inflammation following vaccination; or, "vaccinia gangrænosa." "Dublin Jour. of Med. Sci.," June, 1880.
35. Mégnin, P.—Caractères microscopiques et comparés des sérums du horse-pox, du cow-pox, et du vaccin humain. [Soc. de Biol., Paris.] "Gaz. Méd. de Paris," June 26, 1880.
36. Vieusse.—Remarques pratiques au sujet d'une série d'inoculations de horse-pox. "Gaz. Hebd.," Aug. 13, 1880.
37. Campana, A.—Di alcuni mezzi terapeutici in dermatologia (crisarobina; pilocarpina). "Giorn. Ital. delle Mal. Ven. e della Pelle," June, 1880.
38. Morris, M.—On scarification as a new remedy in skin disease. "Brit. Med. Jour.," Aug. 7, 1880.
39. Bulkley, L. D.—On the use of sulphur and its compounds in diseases of the skin. "Arch. of Dermatol.," July, 1880.
40. Atkinson, I. E.—The use of caustics in dermatological practice, with special reference to the treatment of new growths. "Trans. of the Med. and Chir. Faculty of the State of Maryland," 1880.
41. Zeissl, M.—Ueber Arzneiexantheme. "Wien. med. Woch.," July 3, 1880.
42. Mauriac, C.—Note sur quelques formes insolites de l'érythème cubébocopahique. "Ann. de Dermat. et de Syphil.," July, 1880.
43. Denk, K.—Ein Fall von Chininexanthem. "Wien. med. Woch.," Aug. 21, 1880.
44. Hyde, J. N.—A contribution to the study of the bullous eruption induced by the ingestion of iodide of potassium. "Trans. of the Am. Dermat. Assn.," 1879.
45. Blackwood, W. R. D.—Some thoughts on rhus poisoning. "Phila. Med. Times," Sept. 11, 1880.
46. Bulkley, L. D.—Remarkable case of feigned eruption. "Arch. of Dermatol.," July, 1880.

1. Dr. Martini gives a brief *report of cases treated in the dermatological division of the Dresden city hospital.* He criticises Hebra's almost complete denial of the efficacy of the derivative method of treatment in acute fevers and other internal diseases by the application of revulsives to the skin; also his view as to the independent nature of skin diseases. Scabies, which is vastly more common in Europe than in this country, appears to have been the chief disease. Vlemingkx's solution (containing lime and sulphur), which had formerly been used to a large extent, was given up on account of its severe and caustic action, and replaced by a modified Wilkinson's ointment (containing sulphur, tar, and chalk). In the treatment of children and patients with an irritable skin, a mixture of equal parts of balsam of Peru and alcohol is employed. A warm bath is given to each patient before the remedy is applied. The writer mentions the fact that

Unna observed albuminuria follow the use of styrax frictions in several cases. The clothing of patients with scabies is subjected to a high degree of heat at the Dresden hospital, in spite of the statement of Hebra, that this is unnecessary. If the heat does not destroy any *acari*, or their eggs, it is certain in many cases to rid the clothing of pediculi. In speaking of psoriasis, he refers to Veiel's statistics, showing an hereditary influence in sixteen out of thirty-six cases; also to his report of a case in which psoriatic patches followed the application of cups, a fact tending to verify Köbner's view as to the vulnerability of the skin in these cases. He refers to the belief of Professor Lang, of Innsbruck, that the cause of psoriasis is a parasite (epidermidophyton), which may be found in the fine pellicle beneath the scales; also to the view of Dr. Poor, of Pesth, that psoriasis is a cutaneous manifestation of malaria. The treatment at the hospital consists in the internal employment of arsenic and the external use of tar. Fowler's solution is administered in from four- to six-drop doses several times daily, the dose being gradually increased. In inveterate cases he gives the Asiatic pill, made according to the following formula: ℞ Acidi arseniosi 0·75 [gr. xj]; pulv. piper. nig. 6·00 [ʒ jss.]; pulv. acaciæ 1·50 [gr. xxij]; pulv. althææ rad. 2·00 [ʒ ss.]; aquam q. s. ut fnt. pil. No. C. Three of these pills are given immediately before dinner, the number being increased gradually. In this form, the arsenic is usually well borne. The tar ointment employed is the following: ℞ Ol. rusci, part. j; ung. aquæ rosæ, part. iv.

3. Galliard reports at considerable length an interesting case of *pigmentary nævus* occurring in patches over the greater portion of the body of a girl of fourteen years. Many of these patches followed the tracts of cutaneous nerves, although some appeared to have no relation whatever to the nervous distribution, and upon no part of the body was the eruption absolutely symmetrical. The patches were very irregular in outline, and varied in their hue from brown to light yellow. Some were perfectly smooth, while others were elevated and presented an abrupt margin. Examined beneath a magnifying glass, and even viewed with the naked eye, a marked exaggeration of the natural creases of the skin, with hypertrophy of the papillæ, was apparent in the latter patches. Disclaiming the intention of introducing a new term, the writer takes into consideration the anatomical and clinical features of the disease, and gives the following designation: "hypertrophic, congenital, pigmentary, flat, generalized dermatoma." A lithographic plate accompanies the description..

4. At a meeting of the Pathological Section of the British Medical Association, Cottle reported, under the name of *congenital neurotic papilloma*, the case of a boy with lines of dark, wart-like growths following the course of certain nerves upon the right side of the trunk, arm, and thigh. The affection was to be distinguished from ichthyosis hystrix, as it was both congenital and unilateral, the latter disease never being congenital, and showing no tendency to follow the course of the cutaneous nerves, even when limited to one side of the body. It differed from ordinary warts in the lesions not having a vascular base and in their not augmenting in size, except with the growth of the body. It bore considerable analogy to zoster, and was regarded as a striking example of perverted nerve action in nutrition. The name "congenital neurotic papilloma," proposed by Cottle, is an excellent one, since it is expressive of the structure and chief clinical features of the growth. A very similar case was recently reported by Dr. F. C. Curtis, in the "Archives of Dermatology," under the name of ichthyosis hystrix congenita.

27. Anderson describes and illustrates a peculiar form of trichophytosis (ringworm) which occurs in various Pacific islands, and which has been reported by Dr. Turner under the name of *herpes desquamans, or Tokelau ringworm*, and by Dr. Patrick Manson under the name of tinea imbricata.

The lesion is scaly, bears a resemblance to ichthyosis, according to Turner, and consists of concentric circles of desquamating epidermis about a quarter of an inch apart. Manson believes tinea imbricata to be quite distinct from tinea circinata, or ordinary ringworm. It shows a tendency to avoid the hairy portions of the body, and, when, through peripheral extension, it invades a hairy part, the follicles do not become involved, and the hair preserves its glossy and natural character. It is very apt to affect a large surface, and the eruption may be almost general. Like ordinary ringworm, it advances over the surface of the skin at about the rate of one quarter of an inch weekly. As Anderson has never met with a case of this affection in his extensive experience, he naturally concludes that it has never made its appearance in Scotland. From a microscopical examination of imported epithelial scales, he finds that it differs in the following respects from ordinary ringworm: it is quite superficial, the fungus is abundant, chains of spores are more numerous than mycelial threads, the spores are irregular in form, being rarely globular, and the mycelial threads are generally long, straight, or gently curved.

30. Dr. Eichhoff's case of *multiple cachectic gangrene of the skin* was that of a child three years old, who, after recovery from a severe attack of eczema of the face, back, and breast, was poorly cared for and imperfectly fed. Numerous small, dark-red spots soon appeared on the back, gradually assumed a bullous form, and finally became gangrenous ulcers. Other spots appeared shortly after, and in like manner became bullæ, and finally ulcers. An ulcer also appeared on the left cornea. The gangrenous lesions healed under treatment, but a month later a second attack occured, accompanied this time with high fever lasting a week. Syphilis was completely excluded in this case, and the writer reports it as one of multiple cutaneous gangrene occurring in a cachectic child.

38. Mr. Morris gives an exceedingly interesting account of his experience in the *treatment of wine-mark by multiple linear scarification*, in three cases, according to the method advocated by Mr. Balmanno Squire. He found, in the first place, that the operation was by no means so easy to practice as one would imagine from the inventor's description. When the part was frozen, it became impossible to scratch parallel lines at intervals of one eighth or one sixteenth of an inch, and, in spite of the use of an instrument with numerous blades, he was finally obliged to give up the freezing part of the operation. In one case he operated for upward of a year, employing this method one hundred and thirty times on the forehead and cheek, the result being a small keloidal growth. In the second case he operated thirty-two times, six times using ether spray and on five occasions applying tincture of iron after the scarification. Result, no alteration in the appearance of the nævus. In the third case the operation was thoroughly performed sixteen times, at intervals of a week, and without the slightest sign of improvement, the patient having meanwhile become thoroughly disgusted with the operation. Although many have attempted the removal of wine-mark according to this method and reported failure, probably no one has put it to such a thorough test as Mr. Morris has done, and certainly he can not be accused of coming to an overhasty conclusion when he asserts that the operation is practically a failure. In cases of dilated capillary vessels, so commonly associated with rosacea of the nose and cheeks, the writer has resorted to multiple linear scarification with success, and prefers this to the old method of operating with a single scalpel, as advocated by Volkmann and Hebra.

45. Blackwood contributes an interesting and valuable paper on *rhus poisoning*, from which he has been a sufferer four times in as many years. The source of this form of dermic poisoning is most frequently to be found in contact with the *rhus toxicodendron*, or poison oak, and the *rhus radi-*

cans, or poison ivy. The *rhus venenata*, or poison sumach, is a variety which is comparatively rare in this part of the country, according to the writer, and the most virulent species, the *rhus pumilum*, is quite unknown in the Northern States. Actual contact with one of these species of rhus is not absolutely necessary to induce an eruption, as the poisonous principle of the plant is extremely volatile, and some persons are so susceptible to its action that they are affected by it even from passing within a dozen feet of the plant when the wind happens to be blowing toward them. Liability to rhus poisoning is most marked during the flowering season—from May to October—although poisoning may occur even in the winter. The susceptibility to the poisonous influence of rhus varies, not only with the individual but in the same person, at different times, and is undoubtedly dependent upon the state of the health. For instance, the writer states that, whereas he was formerly able to handle any variety of rhus with impunity, toxic results now follow the slightest contact. The occurrence of the eruption upon the face and genitals after the hands have become poisoned through contact with the plant is commonly believed to result from a direct inoculation of these parts. The writer, however, believes that the eruption may be transferred to various parts of the body by means of reflex irritation, and as a proof of this view he states that, during the height of the disease, scratching will develop an herpetic eruption on apparently healthy parts of the body, even if this scratching be done by a person whose hands are unaffected. This would seem to indicate that the affection is constitutional, which is the case, according to the writer, who maintains that it runs a regular course of from seven to ten days, terminating in desquamation, and that treatment has no effect beyond mitigating the severity of the symptoms. The many agents recommended as curative have little or no value beyond their power to occupy the attention of the patient. The writer states that personally and with patients he has exhausted the list of the alkalies, ammonia, soda, and potassa; the sulphites and bi-sulphites; solutions of bromine, iodine, carbolic acid, and permanganate of potassium; saturated infusions and tinctures of serpentaria and lobelia; stale beer, milk, and numerous ointments, officinal and extemporaneous—all without real benefit. His treatment consists in administering a saline purgative in the morning, with perhaps two to five drops of tincture of aconite, followed toward noon by from three to ten grains of cinchonidia or quinia sulphate, and a full dose of morphia at bedtime. To allay the distressing pruritus, lime-water is beyond doubt the simplest and best local application. The galvanic current also has a soothing effect. An interesting statement is made by the writer that, after exposure to the poison, and before the eruption manifests itself, contact with other persons may convey to them the poisonous effects of actual contact with the rhus itself. As a warning to his readers, he mentions two instances in which he accidentally conveyed the disease to patients. The first was that of a lady with a Colles's fracture, who suffered more from the herpetic eruption than from her injury. The second was a gynæcological case. We regret that the writer has nothing to say concerning the peculiar eczematous eruption which often appears at a certain season, year after year, in some who have once been the subject of rhus poisoning.

QUARTERLY REPORT ON ORTHOPÆDIC SURGERY.

No. II.

By CHARLES T. POORE, M. D.,
SURGEON TO ST. MARY'S FREE HOSPITAL FOR CHILDREN.

1. **Lee**, E. W., and **Fenger**, C.—Select topics of modern surgery, etc. "Chicago Med. Jour. and Exam.," July, 1880.
2. **Spender**, J. K.—On movement as a therapeutic agent. "Brit. Med. Jour.," Aug. 7, 1880.
3. **Battey**, R.—Scrofulous disease of joints complicating phthisis. "Trans. of the Med. Assoc. of Georgia," 1880.
4. **Buchanan**, G.—Strumous disease of the elbow-joint, simulating malignant disease. "Glasgow Med. Jour.," Aug., 1880.
5. **Buzzard**, T.—The joint affections in locomotor ataxia and its association with gastric crises. "Brit. Med. Jour.," Sept. 4, 1880.
6. **Dreschfeld.**—Case of locomotor ataxy with arthropathies. "Lancet," July 10, 1880.
7. **Verneuil.**—De la paralysie et de l'atrophie des muscles de la cuisse dans quelques affections du genou et en particulier dans l'hydrarthrose, heureusement traitées par l'électricité. "Rev. de Thérap.," Aug. 15, 1880.
8. **Cornil**, M.—Paralysie pseudo-hypertrophique. [Soc. Méd. des Hôp., Paris.] "Bull. Gén. de Thérap.," July 15, 1880.
9. **Moore**, M.—Report of the history of a family, three members of which are the subjects of pseudo-hypertrophic muscular paralysis. "Lancet," June 19, 1880.
10. **Luo**, H.—Des contractures d'origine traumatique. "Revue Mens. de Méd. et de Chir.," June, 1880.
11. **Proust**, A., et **Ballet**, G.—Note sur un cas d'atrophie musculaire dans le cours du mal vertébral de Pott. "Rev. Mens. de Méd. et de Chir.," June, 1880.
12. **Smith**, E. N.—Etiology of Pott's disease. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.
13. **Peter.**—Case of tuberculosis; Pott's curvature. "Med. Press and Circular," July 1, 1880.
14. **Davy**, R.—Clinical lecture on the treatment of spinal curvature by hammock suspension and the application of the plaster, felt, or glue jacket. "Brit. Med. Jour.," June 26, 1880.
15. **Swain**, W. P.—Hints on the application of the poro-plastic jacket in spinal curvatures. "Lancet," June 26, 1880.
16. **Hunter**, C. T.—The leather jacket in the treatment of spinal curvature. "Boston Med. and Surg. Jour.," June 17, 1880.
17. **Marsh**, H.—On the treatment of chronic inflammatory affections of the joints in childhood, with especial reference to excision. "Lancet," July 31, 1880.
18. **Garcia**, F. C.—De las resecciones subperiósticas. "Revista de Med. y Cirug. Práct.," Aug. 7, 22, Sept. 7, 1880.
19. **Poinsot**, G.—De la resection de tarse, ou tarsotomie, dans le pied-bot varus ancien. "Bull. et Mém. de la Soc. de Chir. de Paris," Aug. 5, 1880.
20. ———.—Resection of the head of the humerus for gun-shot wound. "Phila. Med. Times," Aug. 14, 1880.
21. **Macewen.**—Case of excision of the wrist-joint. "Glasgow Med. Jour.," May, July, 1880.

22. **Völker**, O. — Osteoplastische Resection des Ellnbogengelenkes. "Dtsch. Ztschr. f. Chir.," xii, 6, 1880.
23. **Fowler**, G. R.—Antiseptic excision of the knee-joint. "Proc. of the Med. Soc. of the County of Kings," Sept., 1880.
24. **Holmes**, T.—Fergusson and conservative surgery.—Excision of the knee and of the hip. "Brit. Med. Jour.," Aug. 14, 1880.
25. **Ollier**.—Sur les résections de la hanche dans la coxalgie suppurée. [Assoc. Franç. pour l'Avancem. des Sci.] "Progr. Méd.," Aug. 28, 1880.
26. **Mason**, F.—Hip disease. Excision. "Lancet," July 31, 1880.
27. **Roberts**, J. D.—Hip-joint disease. "N. Carolina Med. Jour.," Aug., 1880.
28. ———.—Cases illustrating the use of plaster-of-Paris bandage in hip disease. "Lancet," July 17, 1880.
29. **Lucas-Championnière**.—De l'ostéotomie ou de l'ostéoclasie dans le traitement des fractures vicieusement consolidées. "Bull. et Mém. de la Soc. de Chir. de Paris," Aug. 5, 1880.
30. **Dentu**.—Cal vicieux de la jambe; ostéoclasie. "Bull. et Mém. de la Soc. de Chir. de Paris," Aug. 5, 1880.
31. **Bœckel**, J.—Traitement du genu valgum chez l'adulte par l'ostéotomie extra-articulaire. "Bull. Gén. de Thérap.," Aug. 15, 1880.
32. **Podrazki**.—Ueber die Behandlung des Genu valgum und die Ogston'-sche Operation. "Wien. med. Woch.," July 24, 1880.
33. **Bruns**, P.—Die supracondyläre Osteotomie des Femur bei Genu valgum. "Centralbl. f. Chir.," Aug. 21, 1880.
34. **Rupprecht**.—Keilosteotomie der Tibia gegen Genu valgum. [Gesellsch. f. Natur- u. Heilk. zu Dresden.] "Dtsch. med. Woch.," Aug. 21, 1880.
35. **Mason**, F.—A case of genu valgum. "Lancet," July 31, 1880.
36. **Grattan**, N. — Description of a splint for treatment of contracted knee-joint. "Lancet," June 19, 1880.
37. **Webb**, W.—Apparatus for the treatment of deformities of the legs in rickety children. "Brit. Med. Jour.," July 17, 1880.
38. **Ried**, E.—Ueber die Behandlung hochgradiger Klumpfüsse durch Resectionen am Fussgerüste. "Dtsch. Ztschr. f. Chir.," xiii, 1880.
39. **Blodgett**, A. N.—Hallux valgus, with a report of two successful cases. "Med. Record," July 10, 1880.
40. **Myrtle**, A. S.—Dupuytren's contraction of the fingers. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.

2. *Movement as a therapeutic agent* in the treatment of crippled joints is often abused and often neglected. When rest should give place to exercise, is a question that is often hard to solve. How many joints do we continually see, from which all inflammatory trouble has passed away, but which yet are of little use to their owners! The patient has forgotten how to use his joint, its nutrition is impaired, and he still goes about on crutches. First, we must satisfy ourselves that there is no bony anchylosis. The patient may be put under the influence of an anæsthetic, when the capability of the joint to be bent or extended can be fairly tested, and we can discover what checks there are to healthy movement. If there are no adhesions to be broken up, the following method is advised: The joint is douched for some few minutes with tepid water falling from a height of three or four feet; then an attendant, sitting in front of the patient, plants a hand on each side of the knee, and, with the thumbs meeting in front, the hands should be moved firmly up and down for eight or ten minutes. At the end of the shampooing, the whole joint should be dry and warm,

and is to be wrapped immediately in oiled silk. After a time the tepid water should be changed for cold water. Passive movements should be made daily, but not to cause any pain or fatigue. The next stage of treatment consists in the application of uniform and gentle support. A weak joint requires support when it no longer requires rest, and the moderate use of the limb should be encouraged until its functions are regained. [In the management of weak and crippled joints or limbs, there is an error often made of exercising the part until it is fatigued. It is a cardinal rule never to exercise such a part until it is fatigued, for then more harm than good is done.]

11. *Muscular atrophy in Pott's disease, confined to the upper extremities*, is a rare symptom, and but few cases are upon record. This case occurred in a man twenty-five years of age, who had had disease in the cervical region for a year or more, accompanied by retro-pharyngeal abscess. There was no curvature, but the spinal column in the cervical region was rigid, and all motions were painful. There had never been any paralysis or contraction of the superior or inferior extremities. Mobility of the lower extremities was intact. There was no modification of sensibility. The nutrition of the upper extremities was profoundly altered. There was an almost complete atrophy of the muscles of the thenar eminence and of the interossei, and the hand had the form of "*main de singe.*" On post-mortem examination, the bodies of the first dorsal and of all the cervical vertebræ were carious. The posterior common ligament was entirely destroyed at the point of disease in the bone, and the dura mater at the same point presented the following condition: the internal surface was smooth and shining, was normal, and did *not* appear to compress the cord; its external surface was covered with small vegetations—the lesion described by Michaud under the name of "*pachyméningite externe caséeuse.*" These caseous products surrounded the cord in a kind of semi-circle, so that the posterior portion of the dura mater was free from them. This inflammatory thickening surrounded the anterior and posterior roots of the nerves which arose from this portion of the cord, and which went to form the tracheal plexus. On microscopic examination, there was found a parenchymatous neuritis of the nerves going to the atrophied muscles. The anterior roots presented the same lesions as the nerve trunks, while the posterior roots appeared perfectly normal. In the middle and inferior portions of the cervical region, corresponding to the origin of the inflamed nerves, there existed a sclerosis of the internal radicular zones, atrophy of the anterior cornua, degeneration of the anterior roots and corresponding nerve trunks. The pathological process seemed to have been as follows: disease of the bodies of the vertebræ, destruction of the common posterior ligament, irritability, chronic inflammation, and thickening of the external portion of the dura mater, compression of the anterior roots of the nerves, neuritis of these nerve trunks from pressure, and secondary implication of the cord. The posterior nerves seemed to have escaped. [It may be stated as an almost universal rule, that paralysis or trophic changes taking place in the upper extremities alone, in the course of Pott's disease, are due to pressure on the nerves as they pass through the dura mater or just outside of it, dependent on thickening of that membrane; that paralysis of the lower extremities, or of the upper and lower, with disease in the cervical region, is due to pressure on the cord itself by a thickened dura mater. The case cited well illustrates this morbid change in the former class.]

12. Mention was made of the rarity of opportunities for examining the *morbid anatomy of caries of the vertebræ;* the author had to extend his inquiries to caries of other bones. We meet with chronic osteitis, beginning, first, in the periphery of the bone; and, secondly, in its center and independent of periostitis. A further grade is that of suppurative

periostitis. Scrofula and syphilis are common causes of caries. The caries which follows superficial osteitis is often independent of scrofula. Scrofulous caries is usually from osteitis centralis. The bones are infiltrated with oily matter, and become light and soft. Constant irritation of an inflamed bone may give rise to caries in a subject otherwise healthy. Of authors who have written upon the subject, some consider the disease entirely dependent upon scrofula; others, that an injury may be the exciting cause in a scrofulous patient; and some Americans consider the disease as wholly due to traumatic causes. The author, from the study of caries in other bones, and from practical observation of caries, divides the cases into four classes, occurring: 1. In patients affected with so-called scrofula; 2. In delicate patients, non-scrofulous, and without any family history of disease; 3. In patients temporarily debilitated by fever, etc.; 4. In patients who present no apparent signs of other illness of any kind, except the pain following an injury. Class 4 he explains as possibly the result of the nature of injuries to the bones of the spinal column. As there is nearly always the same kind of injury in fractures—the upper part of the spinal column being bent violently forward, so that the anterior part of a vertebra is crushed or broken off by the vertebra above it, and the posterior parts of the bodies of the vertebræ are uninjured—he supposes that an injury not severe enough to cause absolute fracture may yet so damage the bone that caries results because the parts are not allowed to rest.

14. Davy advocates the following *method of applying a plaster, felt, or glue jacket for spinal curvature:* A piece of strong canvas is procured, longer than the patient's person; and the arms are passed through two slits in the canvas at suitable points, so that, in the first instance a long, loose canvas apron, with one end turned downward over the chest, and the other on the floor, fits around the front and sides of the body. This apron is then removed from the patient, and a vest is applied, of thicker material and far more open mesh than those usually supplied by surgical instrument makers. The canvas hammock is next slung from two fixed points. The patient is then placed in the hammock thus made, with the arms passed through the two slits, and the canvas is smoothly wrapped around the body. The plaster bandages can then be applied. When the bandage has become firmly set, the superfluous ends can be cut off, and the apparatus is completed.

17. Marsh advocates rest and support in the *treatment of chronic inflammation of the joints in childhood*, and considers that, if these means are faithfully carried out, operative interference is seldom called for. But, once let any change in the relations of the ends of the bones forming the joint take place, and restoration without an operation becomes an impossibility. This is especially true in regard to the knee-joint—when the tibia is once displaced in relation to the condyles of the femur, we possess no means by which this distortion can be corrected, and, in order to relieve the deformity, excision is called for. For diseases of the knee-, ankle-, and elbow-joints, he advocates the use of leather splints. They should be long enough to give thoroughly efficient support. The elbow should be put up at rather less than a right angle; the knee, as nearly straight as it can easily be brought; the wrist, slightly flexed; and the ankle, very carefully at a right angle. If, when first seen, a knee is found to be contracted, it is put up without any attempt to alter its posture. The surrounding muscles soon relax under the influence of rest, and then the joint will gradually become extended. This spontaneous extension of the limb is a sure sign that the joint is steadily improving. If there is dislocation, splints can do little toward removing it. For splints, he uses leather from which all grease has been removed, and which has not been compressed. Such leather, when soaked for five or ten minutes, becomes perfectly flexible and limp, and can be molded to the limb as accurately as plaster of Paris. He uses an anterior and a posterior splint. He does not consider that rest to an inflamed joint favors anchylosis. In his experience, excision of the knee is seldom called for in childhood; recovery may be looked for even when there is much disease of the bone, by giving the joint rest by means of a properly applied splint and sustaining the health with appropriate nourishment.

22. Völker's case of *osteoplastic resection of the elbow-joint* was that of a boy thirteen years of age, who had fallen six months before and injured his left elbow in such a manner that the ulna and radius were dislocated, so that the head of the radius projected on the external side of the joint, and on the opposite aspect the internal condyle of the humerus formed a projecting ridge. The olecranon was dislocated on to the external condyle; the hand was in a posture of semi-pronation; the forearm formed an obtuse angle with the arm; and there was but slight motion at the elbow-joint. The ulnar nerve was involved, so that the nutrition of the parts supplied by it was changed. Attempts to reduce the dislocation had failed. The following operation was done: An incision was made along the long axis of the humerus downward and outward as far as the articulating surface of the radius; thence across the base of the olecranon to its inner border. The periosteum was detached from the olecranon, and the bone was divided on a level with the head of the radius. The adhesions were freely divided within the joint so as to expose it thoroughly. The forearm could now be brought into its normal posture, although when unsupported it assumed its abnormal one. A small fragment of bone was found adherent in the olecranon fossa, and was removed with a gouge. The detached olecranon was then united to the ulna by sutures. The forearm was still inclined to become dislocated, due to the fact that the head of the radius, striking against its point of articulation with the humerus, acted as a lever. After removing the head of the former bone, the tendency was overcome. The wounds were then united, a drainage-tube was inserted, and antiseptic dressings were applied. On the third day the margins of the incision became gangrenous. After three weeks the olecranon seemed to be firmly united, and passive motion was begun. From this time recovery was rapid. The joint assumed its normal shape, the functions of the ulnar nerve were reëstablished, and the motions were wellnigh normal. The class of cases in which this operation may be performed is restricted to those in which the olecranon is not involved in disease; and therefore it is not applicable to the majority of cases of caries, but to recent and chronic dislocation. [Dr. Rose has reported ("Lancet," May 29, 1880) a case in which he opened the elbow-joint and sutured the olecranon to the ulna, for an ununited fracture, with a good result.]

24. In his address on surgery, Mr. Holmes discusses the operations of *excision of the knee- and hip-joints.* He traces the change of opinion in regard to their usefulness. When excision of the knee was first introduced, it was intended to supersede amputation in chronic disease. It soon became clear that it could not do this, but another question was raised, namely, how far excision ought to be substituted for the natural cure by anchylosis. All surgeons are aware how imperfect natural cures often are; how, after years of suffering and enforced inactivity, the patient has obtained a reprieve, and has been able to use the limb for a time; then a fresh recrudescence of the disease takes place, followed, perhaps, by another period of convalescence, until, finally, the limb has become useless, and amputation has to be submitted to. How much of this suffering would an exsection save our patient? Hence occurs the question, How far is it justifiable to forestall all this suffering by a resort to excision in certain cases, even though the surgeon can not say that a natural cure is in his judgment impossible, or highly improbable? There is another class of cases, sometimes difficult to separate from those last mentioned, in which the anchylosis, though incomplete, is in such an unfavorable posture that the limb is useless. In these cases, the author thinks, excision is a most valuable operation. Of late years the advisability of free incision and drainage of joints has been advocated. After such an operation, the joint relapses into a quiet state, with some mobility. The author has a strong impression that those cases of anchylosis are the soundest which are the quickest and most complete, and he is not sure that the preservation of a certain imperfect movement in the joint is of any real benefit to the patient. He confesses to some want of confidence in the permanency of the cure obtained by incision and drainage in a tolerably large proportion of the cases. Out of two hundred and forty-five cases of exsection of the knee, performed in seven leading hospitals in England in the five years ending 1878, twenty-two patients died; forty-seven of the operations failed; one hundred and seventy-three succeeded; and four were unaccounted for. Of the forty-seven patients in whom the operation failed, thirty-six are said to have submitted to amputation. Speaking from experience in this operation, he would say that in cases such as are usually called strumous, where the bones are only superficially ulcerated; in cases of degeneration of the synovial membrane; in cases of limited inflammation tending to necrosis; in cases of abscess in the bone not extending too far from the joint; and in selected cases of rheumatoid arthritis—the operation may be tried in healthy subjects with fair prospect of success, and in childhood especially, without much detriment to the prospect of success in a consecutive amputation, should that prove necessary. And, as to the utility of the limb, when the process of union goes on rapidly, it is usually very strong, good, and useful, even if it be considerably shortened when the patient grows up. In regard to excision as a substitute for the expectant treatment, he thinks that, in cases of long-standing disease, we are fairly entitled to argue that patients would have an improved chance of reaching a ripe old age after an excision has enabled them early to take fresh air and to enjoy the invigorating influences of active life and occupation. The following he would offer as a fair summary of recent experience: I. Excision of the knee is one of the indispensable resources of surgery, and is useful in all three classes of cases, viz., in those where, otherwise, amputation would be indicated; in those where the expectant treatment might succeed, but is doubtful; and in cases of vicious anchylosis. II. As a substitute for amputation, it is indicated in early life in non-tuberculous subjects; in cases of limited caries of the bones, of degeneration of the synovial membrane, and in some conditions of necrosis of the articular surfaces; possibly also in abscess in the ends of the bones. III. As a substitute for expectant treatment, it seems to be justifiable, and is extensively used in cases where the patient's circumstances and the slow progress of the case render the surgeon hopeless or very doubtful of recovery with sound anchylosis. IV. It is frequently used, and is very successful, in cases of vicious or deformed anchylosis. V. Attempts have been made to limit the range of excision by opening the joint and maintaining drainage, or by some other partial method. These attempts have been fairly successful, especially in cases where the affection is rather of the synovial membrane than of the bones; and they deserve more extensive trial than they seem as yet to have obtained. VI. At the same time, the mortality from excision of the knee seems of late years to have diminished so greatly as to encourage the hope that the limit of age, which it has been found necessary hitherto to observe, may be extended, and that it may be judged prudent to employ the operation in the treatment of the more chronic affections of later life, such as chronic rheumatic arthritis, more extensively than has been done up to the present time.

In regard to *excision of the hip-joint*, he considers that all statistics are very untrustworthy, because the definite result of this excision is frequently not ascertained for the period after the patient has passed from observation. He draws attention to the fact that disease of the hip-joint is very common among the wealthier class, but yet excision is rare. As to the question of the relative value of the cure by spontaneous anchylosis and of that obtained by excision, his own opinion is that a natural cure is far superior to one following an excision. Cases where the head of the bone has separated from the diaphysis, or a sequestrum from some other source occupies the joint, or an ulcer is formed in the neck or head of the bone, are incurable except by operation. What the average frequency of these cases may be, it is hard to say. He has repeatedly found sequestra in hip-joints while performing excision; but he thinks these were neglected cases. He considers that rest in bed, careful extension, so long as abscesses are forming or in an active stage, then a well-fitting splint (Thomas's) will suffice to control the disease, and in time lead to a cure by anchylosis. Morbus coxarius is rarely incurable if taken early. He considers that it has no necessary connection with any constitutional dyscrasia; that there is every reason for believing that the abscesses which frequently accompany it are more often the result of injudiciously irritating inflamed parts than the inevitable or even usual consequence of that inflammation itself; that the constitutional mischief which often ends the life of patients with advanced hip-disease is usually not the cause but the consequence of that disease, and that, if we could remove the cause by curing the disease early, there would rarely be any amyloid or tubercular degeneration of the viscera. This would leave for excision only those cases in which the presence of sequestra was ascertained by examination, or reasonably inferred from the failure of the sinuses to close, and those cases in which the symptoms were so grave that the surgeon thought it necessary to intervene in order to save life. There are other rarer conditions of the hip-joint, such as acute inflammation, attacking the epiphysal cartilage, and rheumatoid arthritis, in which the joint has been excised successfully.

31. In a communication to the Académie de Médecine, Bœckel states that he has collected two hundred and twenty-six cases of *osteotomy for genu valgum in adults*, with five deaths, or a mortality of about one in fifty. Besides these fatal cases, he gives one of osteomyelitis with inflammation of the knee, cured in eight months, with limited motion; one of temporary paralysis of the parts supplied by the peroneal nerve; five of anchylosis of the knee; and three of inflammation of the knee, followed by more or less limitation of motion. In the case of a patient, twenty-two years of age, with genu varum on the right side and valgum on the left, he removed a wedge-shaped piece of bone from the inner aspect of the left tibia, and, a few weeks later, performed a simple osteotomy on the right one, with a perfect result. In the case of a patient, twenty-eight years of age, with a genu valgum of the right limb, the deformity having begun during convalescence from typhoid fever in the eighth year of age, linear osteotomy was performed. The patient recovered with a straight limb in seven weeks.

32. Blodgett reports two successful cases of exsection of the head of the first metatarsal bone for *hallux valgus* in a middle-aged patient. A longitudinal incision was made over the bone, and connected with another one at right angles to it. No ligatures were applied.

Miscellany.

HÄLLSLEN ON THE ELECTROTONUS OF SENSITIVE NERVES.—In studying the excitability of sensitive nerves in electrotonus, Dr. K. Hällslen, of Helsingfors ("Nord. med. Ark.," xii, 1, 1880), has made use of the same method as is employed in studying the excitability of such nerves at different points. If we designate as *ascending*, the current which runs in the sensitive nerve toward its peripheral extremity, and as *descending*, the current running in the opposite direction, the law of the modification of the excitability of the sensitive nerve in electrotonus may be expressed in the same way as that of the corresponding modifications of the excitability of the motor nerve. It was only when the excitation acted at some point between that of the poles of the polarizing current at the greatest distance from the spinal cord and the peripheral extremity of the sensitive nerve, that the experimental results did not agree with this law ; so that the reflex movement did not appear in the descending current, and did not increase in the ascending current. The author, however, regards this deviation from the law as merely apparent; for, regard being had to the notable resistance which should exceed the nervous activity starting from this point, the state of excitation being conducted not only through the polarized portion of the nerve, but also through the spinal cord, there is no warrant for inferring that the excitability of the nerve would be diminished in this case. The experimental results demonstrate that the modifications of excitability in electrotonus of sensitive nerves follow the same laws as in that of the motor nerves.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.—The Eighth Annual Meeting will be held in New Orleans, commencing Tuesday, December 7, 1880, and ending Friday, December 10, 1880. Papers will be presented on Abattoirs, Epidemics, Life Insurance in its Relation to the Public Health, the Storm-water Question in City Sewerage, the Sanitary Engineering Problems of the Mississippi River, the Hygiene of Emigrant Ships, the Prevention of Venereal Diseases, Voluntary Sanitary Associations, etc. The special questions suggested for discussion at this meeting, in addition to those connected with the papers above referred to, relate to methods of preventing the spread within a town or city—after they have once been introduced—of such contagious or spreading diseases as diphtheria, scarlet fever, yellow fever, measles, small-pox, etc., and are as follows: A. What are the best means of securing prompt and reliable information as to the presence and location of cases of such diseases? B. What are the best means of securing isolation of the first or of single cases of such diseases, and what are the chief difficulties in securing such isolation? C. Under what circumstances is it proper to declare such diseases epidemic in a place? D. Under what circumstances is it proper to recommend the closure of schools on account of the prevalence of such diseases? E. What precautions should be taken at the termination of each case as to—*a*. Care and disposal of the dead? *b*. Disinfection and cleansing of the room and house? *c*. Period of time at which it is safe to allow the convalescent to return to school or society? Brief practical papers upon any or all of these points are earnestly requested, and it is hoped that those attending the meetings will come prepared to give the results of their experience upon the questions, and to make positive recommendations. Gentlemen who propose to present papers at this meeting are respectfully requested to notify the President or Secretary of their intentions and of the title of their papers, in order that they may be assigned a proper place in the programme.

The officers of the Association are as follows: *President*, John S. Billings, M. D., Surg. U. S. A., Washington, D. C. *Vice-President*, R. C. Kedzie, M. D., Lansing, Mich. *Secretary*, Edward H. Janes, M. D., New York City. *Treasurer*, J. Berrien Lindsley, M. D., Nashville, Tenn; C. B. White, M. D., New Orleans, La.; E. M. Hunt, M. D., Metuchen, N. J.; J. D. Plunket, M. D., Nashville, Tenn.; C. F. Folsom, M. D., Boston, Mass.; J. G. Thomas, M. D., Savannah, Ga.; A. L. Gihon, M. D., Medical Director, U. S. N., Washington, D. C.

A Matter of Ethics.—A New York practitioner, whose name we withhold, for obvious reasons, has been made the subject of the following communication: " At the annual meeting of the Medical Society of Richmond County, New York, held July 7, 1880, the following resolution was unanimously adopted: *Whereas*, Dr. ——, at the meeting of the American Medical Association on June 4, 1880, offered a resolution impeaching the standing of the Richmond County Medical Society on account of the alleged former irregularity of one of its members; and, *Whereas*, this society is in possession, after careful inquiry, of evidence showing that the member referred to has been recognized as in regular professional repute since his graduation, and that his position in this respect was known to Dr. ——, at least as long ago as in 1869; therefore, *Resolved:* That the above mentioned resolution offered by Dr. —— must have been known by him to be utterly invalid as regards the standing of the Richmond County Medical Society, and could only have been prompted by an intent to injure the character of a physician whose record has been before the profession for many years. That a copy of this resolution be forwarded by the Secretary to the principal medical journals.—W. C. Walser, M. D., *Secretary*."

Army Intelligence.—*Official List of Changes of Stations and Duties of Officers of the Medical Department of the United States Army from September 14, 1880, to October 13, 1880.*—Moore, Jno., Major and Surgeon. Assigned to temporary duty as member of the Army Medical Board in New York City. S. O. 194, A. G. O., September 11, 1880. ═══Irwin, B. J. D., Major and Surgeon. Relieved from duty in Department of Dakota and to report in person to the Lieutenant-General commanding Military Division of the Missouri, for duty as Attending Surgeon at headquarters of that division, relieving Surgeon Spencer. S. O. 205, A. G. O., September 24, 1880.═══Spencer, W. C., Major and Surgeon. When relieved by Surgeon Irwin, to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 205, C. S., A. G. O.═══Goddard, C. E., Major and Surgeon. To report in person at the expiration of his present leave of absence to the Superintendent, Mounted Recruiting Service, for duty as Post Surgeon at the Cavalry Depot, Jefferson Barracks, Mo. S. O. 205, C. S., A. G. O. ═══Happersett, J. C. G., Major and Surgeon. Assigned to duty as Post Surgeon at Fort Brown, Texas, to enable Assistant Surgeon F. Meacham to comply with S. O. 190, C. S., A. G. O.; in his case, S. O. 19, Department of Texas, September 29, 1880.═══Brown, J. M., Captain and Assistant Surgeon. To accompany battalion, Sixteenth Infantry, from cantonment on the Uncompahgre, Col., to Fort Garland, Col., and there remain on duty. S. O. 211, Department of the Missouri, September 22, 1880.═══Brewer, J. W., Captain and Assistant Surgeon. Assigned to duty at McPherson Barracks, Atlanta, Ga. S. O. 117, Department of the South, October 7, 1880.===Tremaine, W. S., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, and to report by letter, at the expiration of his present sick leave of absence, to the Surgeon General. S. O. 205, C. S., A. G. O.===Pope, B. F., Captain and Assistant Surgeon. Having reported at these Headquarters, is assigned to duty at Fort Sully, D. T. S. O. 122, Department of Dakota, October 9, 1880.===Dickson, J. M., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Vancouver Barracks, W. T. S. O. 171, Department of the Columbia, September 24, 1880.===Munn, C. E., Captain and Assistant Surgeon. To accompany the battalion of the Fourth Cavalry, which is relieved from duty with the Ute expedition, to Fort Garland, Col., and then proceed to take post at Fort Hays, Kan. S. O. 210, Department of the Missouri, September 21, 1880.===Cronkhite, H., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Camp Sheridan, Neb. S. O. 94, Department of the Platte, October 5, 1880.===Heizmann, Chas. L., Captain and Assistant Surgeon. Granted leave of absence for one month, with permission to apply at Division Headquarters for an extension of one month, and to the Adjutant General of the Army for a further extension of two months. S. O. 170, Department of the Columbia, September 23, 1880. Leave of absence extended one month. S. O. 148, Division of the Pacific and Department of California, September 28, 1880.===Wilson, Wm. J., Captain and Assistant Surgeon. Having reported at these Headquarters, is assigned to duty at Fort Meade, D. T. S. O. 121, Department of Dakota, October 6, 1880.===Weisel, D., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Warren, Mass. S. O. 181, Department of the East, October 8, 1880.===Matthews, W., Captain and Assistant Surgeon. Having reported at these Headquarters, is assigned to duty at the cantonment on the Uncompahgre, Col. S. O. 223, Department of the Missouri, October 8, 1880.===Harvey, P. F., Captain and Assistant Surgeon. Assigned to duty at Fort Snelling, Minn. S. O. 113, Department of Dakota, September 22, 1880.===Winne, C. K., Captain and Assistant Surgeon. Relieved from duty at Fort Brady, Mich., and assigned to duty as Post Surgeon at Fort Schuyler, N. Y. H. S. O. 167, Department of the East, September 21, 1880.===Ainsworth, F. C., Captain and Assistant Surgeon. Granted leave of absence for six months. S. O. 196, A. G. O., September 14, 1880.===Semig, B. G., Captain and Assistant Surgeon, Fort Fred. Steele, W. T. Granted leave of absence for one month. S. O. 95, Department of the Platte, October 9, 1880.===Price, C. E., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Niagara, N. Y. S. O. 175, Department of the East, September 30, 1880.===Reed, W., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Ontario, N. Y. S. O. 167, C. S., Department of the East.===Biart, V., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Missouri, and to report in person, at the expiration of his present sick leave of absence, to the Commanding General, Department of Dakota, for assignment to duty. S. O. 205, C. S., A. G. O. Above order suspended till May 1, 1881. S. O. 209, A. G. O., September 30, 1880.===Gray, Wm. W., First Lieutenant and Assistant Surgeon. When relieved by Assistant Surgeon Dickson, to report to commanding officer, Fort Canby, W. T., for duty as Post Surgeon. S. O. 171, C. S., Department of the Columbia.===Richard, Chas., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Snelling, Minn., and assigned to duty as Post Surgeon at Fort Maginnis, M. T. S. O. 110, Department of Dakota, September 15, 1880.===Benham, R. B., First Lieutenant and Assistant Surgeon. Assigned to temporary duty with escort to working parties on extension of Northern

Pacific Railroad, at Camp Houston, D. T. S. O. 113, C. S., Department of Dakota. ═══ Gorgas, W. C., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort McIntosh, Texas, to enable Assistant Surgeon J. H. T. King to comply with S. O. 190, C. S., A. G. O.; in his case, S. O. 199, C. S., Department of Texas.

United States Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, from July 1, 1880, to September 30, 1880.*—Bailhache, P. H., Surgeon. Relieved from temporary duty as medical officer of Revenue bark S. P. Chase, and ordered to rejoin his station as member of the National Board of Health. August 26, 1880. Detailed for duty as medical officer of the port of Georgetown, D. C., during temporary absence of Passed Assistant Surgeon Fisher. September 17, 1880. ═══ Miller, T. W., Surgeon. Granted leave of absence for seven days from July 17, 1880. July 18, 1880. ═══ Gassaway, J. M., Passed Assistant Surgeon. Relieved from duty at Port Townsend, Washington Territory, and ordered to report to Surgeon Fessenden at New York. July 17, 1880. Granted leave of absence for thirty days, from September 1, 1880. August 9, 1880. ═══ Stoner, G. W., Passed Assistant Surgeon. Detailed as Recorder of Board for the Physical Examination of Cadets of the Revenue Marine Service. July 6, 1880. ═══ Fisher, J. C., Passed Assistant Surgeon. To proceed to Elizabeth City and Edenton, North Carolina, as inspector. September 17, 1880. ═══ Goldsborough, C. B., Assistant Surgeon. Granted leave of absence for thirty-one days, from August 26, 1880. August 13, 1880. ═══ Irwin, Fairfax, Assistant Surgeon. Granted leave of absence for twenty-one days, from August 14, 1880. August 2, 1880. ═══ Mead, F. W., Assistant Surgeon. Relieved from duty at San Francisco, California, and ordered to assume charge of the service at Port Townsend, Washington Territory. July 7, 1880. ═══ Cooke, H. P., Assistant Surgeon. Granted leave of absence for twenty days, from November 23, 1880. September 6, 1880. ═══ Guitéras, John, Assistant Surgeon, To report for temporary duty to Surgeon Sawtelle, St. Louis. July 7, 1880. Relieved from temporary duty at St. Louis, and ordered to report to Surgeon Austin, New Orleans. September 28, 1880. ═══ Wheeler, W. A., Assistant Surgeon. To report for temporary duty to Surgeon Fessenden at New York. July 7, 1880. ═══ Benson, J. A., Assistant Surgeon. To report for temporary duty to Assistant Surgeon Goldsborough at Baltimore. July 7, 1880. ═══ Banks, C. E., Assistant Surgeon. To report for duty to Surgeon Hebersmith, San Francisco. July 9, 1880. ═══ *Promotions.*—Godfrey, John, Passed Assistant Surgeon. Promoted to be Passed Assistant Surgeon from July 1, 1880. July 6, 1880. ═══ Brown, F. H., Passed Assistant Surgeon. Promoted to be Passed Assistant Surgeon from July 1, 1880. July 6, 1880. ═══ *Appointments.*—The following candidates, having passed the examination required by the regulations, were appointed Assistant Surgeons, July 6, 1880: John Guitéras, of Pennsylvania; William A. Wheeler, of Indiana; John A. Benson, of New Jersey; and Charles E. Banks, of Maine.

THE
NEW YORK
MEDICAL JOURNAL.

DECEMBER, 1880.

Original Communications.

THE HUMAN FACE; ITS MODIFICATIONS IN HEALTH AND DISEASE, AND ITS VALUE AS A GUIDE IN DIAGNOSIS.

By AMBROSE L. RANNEY, M. D.,
ADJUNCT PROFESSOR OF ANATOMY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

The extent to which the anatomy of the head, as studied from the standpoint of physiognomy, may suggest points of practical value to the physician or surgeon, has not, in my opinion, received sufficient consideration in the popular text-books of the day. From the "British and Foreign Medical Review" of 1841 I quote the following sentence: "Medical physiognomy is, in many instances, a source of diagnosis which seldom fails the practitioner who is himself well versed in it; and we believe that much of the exquisite tact in discrimination of disease, which distinguishes some practitioners and which others can never attain, depends upon the vivid perception of an eye and ear habitually familiar with the lineaments, the tone, and the gestures of disease." Among the earlier authors, who were ignorant of many of the present methods of determining the condition, size, and position of organs, since the art of auscultation and percussion is a growth of later date, the study of the human countenance formed a very important part of the preparatory drill. The followers of Hippocrates and Galen were rendered perfect in their perceptive faculties. The former gave to us, in his masterly work, descriptions of the symptoms of disease which are still considered classic, while the latter, in his essays on the "Temperaments,"* is equally careful to note the most trivial alteration either of the face or of the posture.

There seems to be a growing tendency of late to regard the rational symptoms of disease as subordinate to the results of a physical examination, and as of but little value in themselves, except as confirmatory evidence. Authors frequently render the description of the symptoms of disease so terse and indefinite, that but few of the readers of the later medical or surgical works could precisely picture to themselves the *appearance* of a sufferer from any of the maladies, with the pathology and physical symptoms of which they may be thoroughly familiar. It is not infrequently the experience of the most erudite of the profession to be amazed at the gift, which is possessed by some less scholarly brother, of making a diagnosis, which seldom errs, without the aid of the thermometer or the stethoscope; and many an old nurse, long accustomed to spend weary nights in watching the sick, can often render a prognosis which seems little short of inspiration when her utter ignorance of all medical knowledge is considered.

Despite the fact that some of our best authors have denounced the attempts of De Salle, Jadelot, and Seibert to establish certain facial lines and wrinkles as of positive value in diagnosis, and have pronounced all such statements as a mere fantasy, still no one of large experience can deny that the face may at times afford most positive and valuable information.

In 1806, Lavater† published his work upon this subject, in which he discusses at great length the diagnostic value of general physiognomy. Subsequently, Sir Charles Bell wrote upon the subject from a purely anatomical point of view, and, in 1824, published his "Essays upon Expression." Baumgaertner* added his contribution to the subject in 1839, and Laycock,† in 1862, published his course of lectures, with illustrations, which were designed to show the various types of diathesis and their bearing upon the general development. Corfe, in 1867, published a series of contributions in the "Medical Times and Gazette," in which the subject was studied from a clinical point of view, and in which not only the entire field of facial expression, but also that of general physiognomy, was pointed out to the student, so far as the cases under consideration illustrated any points of special interest.

---

* Kuhn's edition.

† "L'Art de connaître les Hommes par Physiognomie." Paris, 1806–'7.

Darwin's great work upon the expression of the emotions in animals and the contributions of Connelly ‡ upon the typical shades of expression peculiar to the insane may well be read by those who question the utility of this much-neglected department of science. The careful study of the expressions of the face and the modifications which age produces in it is at least very advantageous in furnishing a normal standard by which deviations in disease may be studied. I quote from the most excellent treatise of Blandin § the following sentence: "Those who neglect or seek to ridicule this mode of investigation prove only one thing, that they study pathology without a proper knowledge of anatomy and physiology, upon which the former is founded. The morbid expressions of the face are an extremely useful and often the only guide of the medical practitioner in the case of a very young child, that can tell nothing in regard to its sufferings."

It is with a view to systematize and arrange the collected investigations of the authors previously named, and to bring within the compass of a single article such practical information as the anatomy of the face may afford the practitioner, that I am led to draw professional attention to this subject once more.

The physiognomy of the sick presents innumerable shades of expression. It may assume the various conditions expressive of sadness, dejection, attentiveness, indifference, uneasiness, or terror; it may, at times, be smiling; occasionally menacing or wandering; and may sometimes show a series of changes in rapid succession.

---

* "Atlas," 1839.

† "Med. Times and Gaz.," 1862, vol. i.

‡ "Med. Times and Gaz.," 1862.

§ "Anatomie Topographique."

These various conditions of the countenance may not only be the direct result of the influence of the ever-varying passions upon the muscles of the face, as is the case in health, but they may also be classed as morbid phenomena, each of which possesses some special significance. Chomel lays great stress upon these variations of countenance, and endeavors to point out the special diagnostic value of each.

FACIAL LINES AND WRINKLES.—The theories of De Salle, Jadelot, and Seibert * as to the diagnostic value of facial lines and wrinkles have had their share of support from time to time; while they have also been considered by some authors as speculative and destitute of any value. The existence of these marks may be attributable to one of two conditions, viz., a disappearance of the fat from the subcutaneous tissues of the face, or the abnormal contraction of certain facial muscles, dependent upon some apparent irritation of the motor nerves supplying the affected muscles. It is important, in using these lines and wrinkles as guides in diagnosis, that the discrimina-

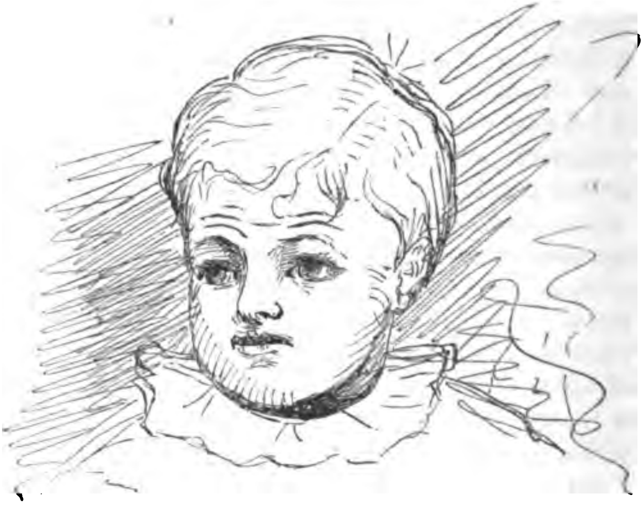


FIG. 1.—The Transverse Rugæ.

---

* WILLIAMS, "Principles of Medicine."

tion be made between those lines which are natural to the face of the sufferer and those which are developed as a result of the disease. For the reason that the face of the adult is always more or less marked by lines,* it must be evident that these lines are a more reliable guide in the infant than in later life, if their diagnostic value remains unquestioned. Without entering into a discussion as to the merits of the question, I give the theories advanced for whatever interest and value they may possess to the reader. The wrinkles of the face may be classified into six groups as follows :

(1.) *The Transverse Rugæ.*—These are situated upon the forehead, and are formed by the action of the occipito-frontalis muscle. They are thought to be expressive of an extreme amount of pain, arising from causes outside of the cavities of the body.

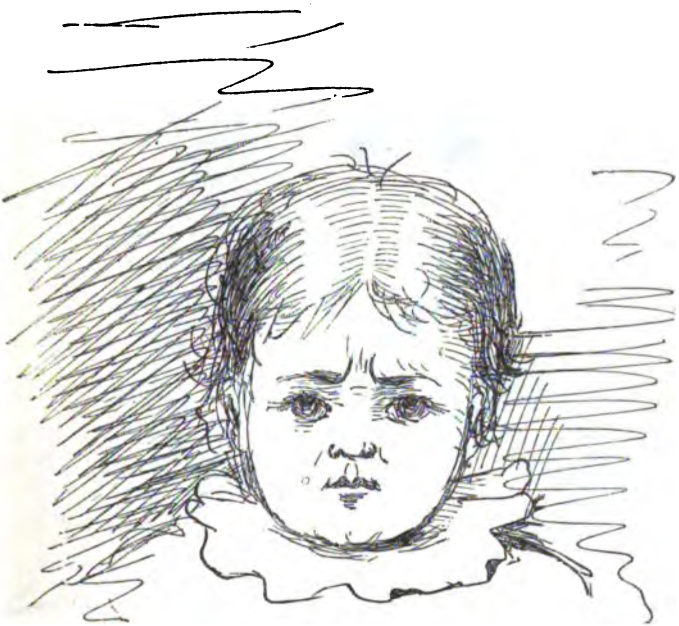


FIG. 2.—The Oculo-frontal Rugæ.

(2). *The Oculo-frontal Rugæ.*—These extend vertically from the forehead to the root of the nose, and are formed by the corrugator supercilii muscles. They are thought to express distress, anxiety, anguish, and *excessive pain from some internal cause.* It is said that they furthermore indicate an imperfect or false crisis; and that, in attacks of acute diseases, an impending efflorescence and sometimes a fatal termination may be indicated by their occurrence. In those types of headache where the pain is very excessive, these rugæ may exist simultaneously with the ones previously described. It is stated that when the former rugæ meet the latter abruptly, during the course of an acute disease, some serious lesion of the brain, or its coverings, is developing.

---

* BLANDIN, *op. cit.*

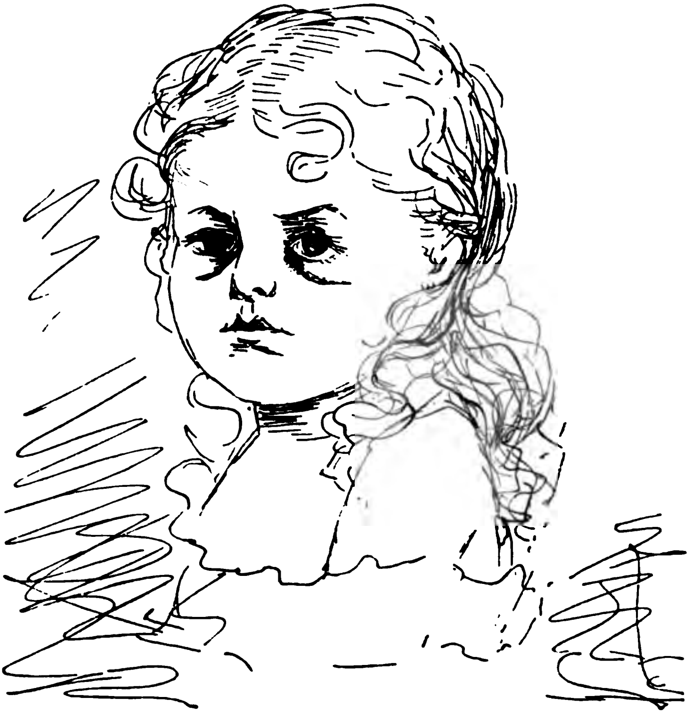


FIG. 8.—The Line of Jadelot.

(3.) *The Linea Oculo-zygomatica.*—This line (the line of Jadelot) extends from the inner angle of the eye downward and outward, passing across the face below the malar bone. It is said to indicate, in children, a *cerebral* or *nervous affection;*[*] and, in adult life, some disease of the genital organs, masturbation, or venereal excess.

(4.) *The Linea Nasalis* (Line of De Salle).—This line extends from the upper border of the ala nasi downward, in a direction more or less curved, to the outer edge of the orbicularis muscle. This line is said to be strongly marked in phthisis and in atrophy. Its upper half (the linea nasalis proper) is thought to be a reliable indication of *intestinal disease,* if extensively developed and prominent; the lower half (the linea buccalis) is supposed to indicate the existence of some *disease affecting the stomach.* It is claimed by Peiper that, when this line appears conjointly with the line of Jadelot, it may be regarded as a positive indication of worms in children, if a peculiar fixed condition of the eye exists and a pallor of the face is present.

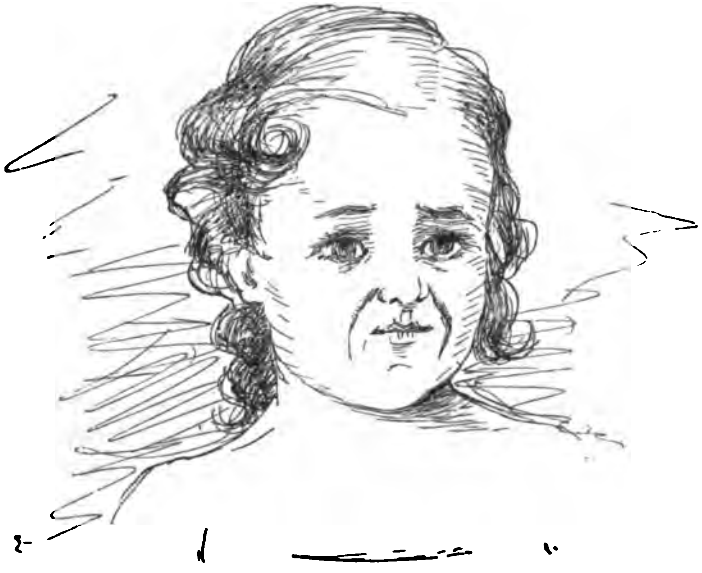


FIG. 4.—The Line of De Salle.

(5.) *The Linea Labialis.*—This line extends downward from the angle of the mouth till it becomes lost in the lower portion of the face. It is usually developed in connection with those *diseases which render breathing laborious* or *painful*, and is more common in children than in the adult as a sign of diagnostic value.

---

[*] VOGEL, "On Diseases of Children." New York: D. Appleton & Co.

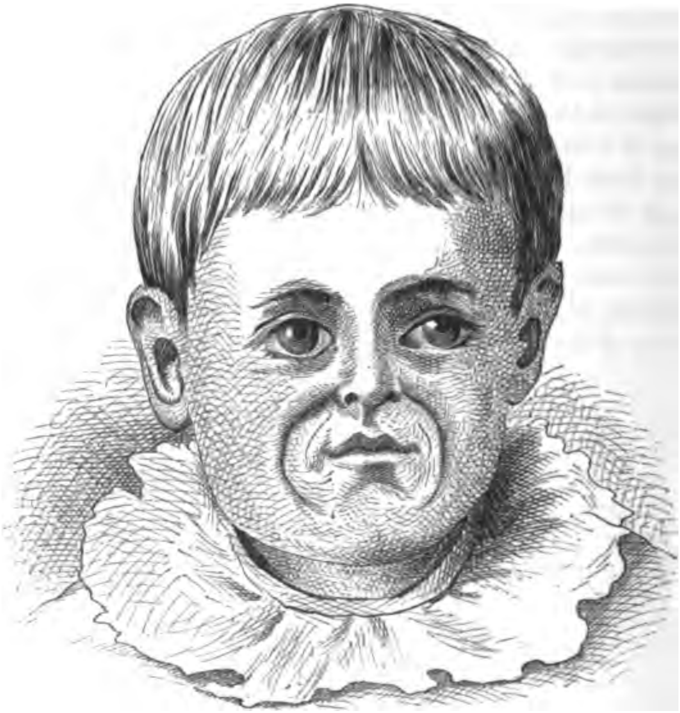


FIG. 5.—The Linea Collateralis Nasi.

(6.) *The Linea Collateralis Nasi.*—This line extends from the nose downward to the chin, in a semicircular direction. It lies outside of the linea buccalis, the linea nasalis, and the linea labialis. It is thought to be a reliable guide to diseases of the *thoracic* and *abdominal viscera.**

COLOR OF THE FACE.—The color of the face is subject to variations which to the eye of the medical adviser afford unquestioned aid in diagnosis. *Flushing* of the face, as evidenced by a diffused redness which is of a transient character, is very common in women suffering from irregularity of the menstrual periods and during the menopause. In plethora, especially after exertion or excitement, an unnatural redness of the face may occur, associated with symptoms indicative of cerebral hyperæmia. Pressure of tumors, either of the neck or of the thorax, upon the sympathetic nerve may create an abnormal dilatation of the capillaries, thus resulting in a redness of the skin, with an increase of the temperature of the affected region; while section of the sympathetic nerve, although a rare form of accident, would result in a like condition.* *Red patches* occur on the cheek during an attack of croupous pneumonia. In wasting affections of a chronic character, especially of the lungs, such as phthisis, cancer, etc., a circumscribed redness over the malar bones, known as the "hectic flush," is usually present. It may occasionally affect only one cheek,† where only one lung is diseased. *Pallor* of the face is the rule during convalescence from any severe disease, and in patients long deprived of sunlight.‡ A *waxy pallor* exists in chronic Bright's disease, which renders the skin almost transparent. In the chill of fevers and malarial attacks, a *dusky paleness* is usually perceived; while in cases of hæmorrhage, where the loss of blood has been sufficient to produce constitutional effects, the pallor of the face assumes a peculiar *leaden color.* § A *greenish tint* is present in profound attacks of anæmia and during chlorosis, ‖ giving to the face an appearance similar to that of imperfectly bleached wax.

---

* CORFE, "Med. Times and Gaz.," 1867.

Malaria and cancer are often manifested by a *light straw color* of the face, although it may occasionally result in the deep yellow of jaundice.¶ In the early stages of jaundice, the sclerotic coat of the eye and the corners of the mouth first show the *yellow color*, although the discoloration soon tends to become diffused over the entire face. A *blue tinge* exists in those cases where the venous return to the right heart is obstructed, or where, from any cause, the oxygenation of the blood is imperfectly performed. It occurs therefore in cyanosis, asphyxia, the fevers, certain diseases of the pulmonary organs which interfere with the circulation, and in diseases of the heart which render its action weak or imperfect. In cases of poisoning from the nitrate of silver, the skin assumes a still deeper blue tint than in those cases above mentioned, and the staining is permanent. In Addison's disease of the supra-renal capsules a *dark-brown color* of the skin results, which may be either uniform or in isolated spots, and which may, in severe cases, almost rival the pigmentation of the negro. The redness of erysipelas is usually accompanied by an œdema which renders the face tense and shining, and which often causes a markedly altered expression of the countenance.

---

* M. Foster. † Stillé. ‡ Williams, *op. cit.*

§ Sir Charles Bell, "Treatise on Surgery."

‖ Niemeyer, "Text-Book of Practical Medicine." New York: D. Appleton & Co.

¶ Reynolds, "System of Medicine."

The face is the seat of many of the eruptions, some of which are confined almost exclusively to it, while others are usually found in that region before they appear elsewhere. It would exceed the limits of this article to enter into the description of the characters which stamp each of the various eruptions, since they can be easily learned by reference to any of the special treatises.

Corfe suggests as a guide to the student in physiognomy the following table, which designates the prevailing changes in the complexion of the face in the course of the more common disorders. While it is not possible to construct any table which shall give all the information desired upon so important a subject, still this one may prove of some value as a means of aiding the memory:

In cerebral disease	the countenance	is	lethargic.
In emphysema	"	"	livid.
In pulmonary œdema	"	"	dusky and distressed.
In pneumonia	"	"	dusky and flushed.
In pleurisy	"	"	pale and anxious.
In phthisis	"	"	pale and thin.
In malignant disease	"	"	sallow and thin.
In icterus	"	"	yellow and thin.
In renal disease	"	"	thin, puffy, and anæmic.
In peritonitis	"	"	anxious and dragged.
In uterine disease	"	"	sallow and haggard.

Marshall Hall* thus describes a countenance which he considers typical of the acute form of dyspepsia: "This affection is accompanied by some paleness or sallowness, and a dark hue about the eye. The lips are slightly pale and livid. The cutaneous vessels exude a little oily perspiration, and the muscles of the face, and especially of the chin and lips, are affected with a degree of tremor, particularly on any hurry or surprise, or on speaking."

---

* "On Diagnosis." London, 1817.

THE NOSE.—The nostrils are of some practical interest from a medical point of view. They *dilate* forcibly and rapidly in difficult respiration, when produced by disease; * and *itching* of the nostril is regarded by many authors as a valuable diagnostic sign of intestinal worms.† The nose seldom points directly forward, being, as a rule, slightly inclined toward the right side. This fact is explained by Béclard as the result of the habit of wiping the nose with the right hand, since, in left-handed people, the opposite deflection exists. The nose of a face perfect in its outline should be one third of the length of the distance from the root of the hair to the chin; but, in certain races, the variation from this rule affords a special physiognomy. The integument which covers the nose is very firmly attached to the muscles underneath it by a cellulo-fatty layer. Blandin ‡ lays great stress upon this fact as explaining the infrequency of œdema of this region, and as an effort on the part of Nature to preserve the uniformity of contour of the nose, which would be seriously impaired by any local swelling of the face, were the skin over the nose loosely attached. The nose is extremely vascular; hence the custom of surgeons to replace severed portions of the organ, even if completely detached, with a hope of obtaining union. Among the ancients, amputation of the nose was practiced upon the criminal classes, and the operation of rhinoplasty was first suggested as a means of relief for those so disfigured.

The redness of the nose after an attack of crying indicates a connection between the sympathetic supply of the capillary vessels of the nose and that of the capillaries of the lachrymal apparatus; hence any form of irritation of either of these localities is liable to be accompanied by symptoms referable to the other.* Injury to the nose, resulting in fracture, often leaves a permanent facial deformity, and, even when no evidences of serious injury can be ascertained by external examination, cerebral symptoms are liable to follow, as fracture of the base of the skull may result, from a transmission of the force through the perpendicular plate of the ethmoid bone.† Vascular tumors of the region of the nose are not uncommon, while a prominence of the capillary vessels of the nose is met with in the aged as the result of a defect in the contractile power of their coats.‡

---

* Sir CHARLES BELL. † PEIPER. ‡ *Op. cit.*

Marked elevation of the nostril is regarded by some authorities § as an indicator of pain within the cavity of the thorax.

THE EYE.—"It may appear to many a superfluous task to attempt to judge of the character of an individual by a glance at his face, but, whatever may be thought of the possibility of laying down strict rules for such judgment, it is a fact of every-day occurrence that we are, almost without reflection on our part, impressed favorably or unfavorably with the temper and talents of others by the expression of their countenance. The face acquires its expression also from bodily habits and from intellectual or sensual pursuits, so that we may pass from the lofty and expanded forehead, with the small, well-formed mouth, of the philosopher, down to the shallow front and protruded muzzle of the negro, whose habits are more bestial than those of the animals he chases for the support of his life." ‖

The intimate communications between the fifth, the seventh, and the sympathetic nerves, through the media of the ciliary, optic, and Meckel's ganglia, would lead us to expect that the eye should exhibit, in its altered appearance, the derangement of internal structures. "When a glance of this organ is caught, what a field of mute expression is open to the mind! This silent and instructive index of the whole man may be bright or dull, heavy or clear, half shut or unnaturally open, sunken or protruded, fixed or oscillating, straight or distorted, staring or twinkling, fiery or lethargic, anxious or distressed; again, it may be watery or dry, of a pale blue, or its white turned to yellow." *

---

* BLANDIN, *op. cit.*

† HOLDEN, "Human Osteology." London, 1855.

‡ BÉCLARD.

§ MARSHALL HALL, *op. cit.*

‖ CORFE, *op. cit.*

The pupils may be contracted or widely dilated, insensible to or intolerant of light, oscillating or otherwise, unequal in size, or changed from their natural clearness of outline. The noble arch of the brow speaks its varied language in every face of suffering humanity. It may be overhanging or corrugated, raised or depressed; while the lid of the eye, an important part of this vault, exhibits alternations of puffiness or hollowness, of smoothness or unevenness, of darkness or paleness, of sallowness or brown discoloration, of white or purple. Lines intersect this region, and the varied tints are perpetually giving new color, new feature, new expression, by their shadows. If the frontal muscle acts in connection with the corrugator supercilii, an acute deflection upward is given to the inner part of the eyebrow, very different from the general action of the muscle, and decidedly expressive of debilitating pain, or of discontent, according to the prevailing cast of the rest of the countenance. An irregularity of the pupils of the two eyes indicates, as a rule, pressure upon nerve centers or upon the optic nerve itself.† In adynamic fevers the eyes are heavy and extremely sluggish, and are, as a rule, partially covered by the drooping eyelid; while in certain forms of mania they are seldom motionless.‡ This latter peculiarity is also often noticed in idiocy.

In the so-called "Bell's paralysis," due to failure of the facial nerve, the eyelids stand wide open and can not be voluntarily closed, since the orbicularis palpebrarum muscle is paralyzed. This condition may be further recognized, if unilateral, by a smoothness of the affected side, since the antagonistic muscles tend to draw the face toward the side opposite to the one in which the muscular movement is impaired; an inability to place the mouth in the position of whistling, since for this act the two sides of the face must act in unison; loss of control of saliva, which dribbles from the

---

* CORFE, *op. cit.*

† FERRIER, "The Localization of Cerebral Disease." New York: G. P. Putnam's Sons, 1879.

‡ CONNELLY, "Med. Times and Gaz.," 1861–'2.

corner of the mouth; and a tendency to accumulation of food in the cheek, since the buccinator muscle no longer acts.

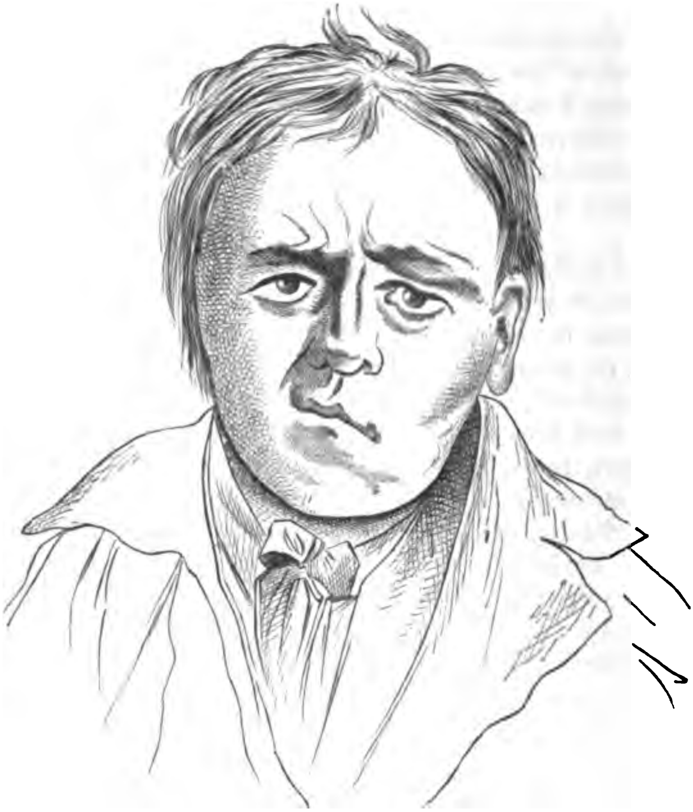


FIG. 6.—"Bell's Paralysis." (Modified from Corfe.)

When the third pair of nerves are affected upon either side, the upper eyelid can not be voluntarily raised, for the levator palpebræ muscle fails to act; and the eye is caused to diverge outward, since the external rectus muscle, not being supplied by the third pair, and having no counterbalancing muscle, draws the eye from its line of parallelism with its fellow. In photophobia, attempts to open the eye create resistance on the part of the patient, since the entrance of light causes pain; while, as death approaches, or in the state of coma (save in a few exceptions), the eyes are usually open. In cardiac hypertrophy an unusual brilliancy of the eye is perceived,* since the arterial system is overfilled from the additional power of the heart. A peculiar glistening stare exists during the course of scarlet fever, which is in marked contrast with the liquid, tender and watery eye of measles.† Many diseases of the eye itself tend to greatly alter the normal expression of the face. Prominently among these may be mentioned cataract, glaucoma, cancer, staphyloma, exophthalmus, iritis, conjunctivitis, amaurosis, etc., but the special peculiarities of each need not be here described.

Abnormalities of the pupils may afford the practitioner material aid in diagnosis. The pupils are found to be dilated during attacks of dyspnœa and after excessive muscular exertion,‡ in the latter stages of anæsthesia, and in cases of poisoning from belladonna and other drugs of similar action. A contracted state of the pupils exists during alcoholic excitement, in the early stages of anæsthesia from chloroform, and in poisoning by morphia and other preparations of opium, physostigmin, chloral, and some other drugs. Paralysis of the third cranial nerve creates a dilated condition of the pupil of the same side, since that nerve controls the circular fibers of the iris.

Growths within the deeper portions of the orbit tend to create a displacement of the eye forward, and thus to cause an apparent increase of that organ in size. A similar condition may also result from abscesses or the growth of tumors within the cavity of the antrum. In the so-called Basedow's disease,§ an abnormal prominence of the eyes accompanies a simultaneous enlargement of the thyroid gland. The eyelashes, if abnormal, not only in themselves create deformity, but also, by causing irritation of the conjunctiva, produce an alteration in the normal expression of the eye.

---

* LOOMIS, "Lectures on Diseases of the Respiratory Organs, Heart, and Kidneys." New York: William Wood & Co., 1874.

† J. DUGGAN, quoted by Haviland Hall: "Differential Diagnosis." Philadelphia, 1879.

‡ M. FOSTER, "Text-Book of Physiology," 3d ed. London: Macmillan & Co., 1879.

§ F. VON NIEMEYER, "Text-Book of Practical Medicine." Translated b Hackley and Humphrey. New York: D. Appleton & Co., 1869.

THE CHEEK.—The cheek is capable of a great variety of movement. During the reception of liquid or solid food into the mouth, it is of the greatest assistance, since by its movements the two acts are greatly facilitated; during mastication, the buccinator muscle helps to force the food between the jaws, which are brought into apposition and rubbed together; and, finally, the cheek can act as an important factor in producing that peculiar type of countenance which is so strongly indicative of the desire of taking nourishment. The respiratory motions of the cheek are manifested in the acts of gaping and blowing, and in the exhibition of intense passion, in which the malar region is markedly in sympathy with a general excitation of the whole respiratory apparatus.

The cheek may become the mirror of the soul. When the feelings are gay, it is drawn outward and upward; but, when the mind is depressed or saddened, it is drawn obliquely downward. If these movements be carefully noted, it will be perceived that the movable point of the cheek is situated in the immediate vicinity of the naso-labial groove;* since the attachments of several of the small facial muscles at about this point tend to draw the anterior part of the cheek outward from the line of this groove. It may be noticed, as a matter of interest, that, when the mental impressions are slight and trivial, no traces of their effect upon the face are left upon the cheek; but, when they are of a serious or prolonged character, deep and permanent grooves are formed, which are of interest to the physiognomist as an indication of the temperament, and to the medical adviser as often of positive value in diagnosis. In the young child, the cheek, which is at nearly the same instant alternately moistened with a tear or decked with a smile, preserves in the healthy state the roundness which marks that happy age; but in the adult, the cheek, on the contrary, presents numerous lines and wrinkles, and this appearance becomes still more apparent as old age approaches. There are, however, lines in the cheek of the aged which should not be mistaken for evidences either of the temperament or of disease, since they are produced simply by the approximation of the jaws. Lavater,* in his work upon physiognomy, locates most of the sentiment of the face in the cheek, and draws comparisons between the base and jealous face and that which is generous and noble, as a support to his theory.

---

* BLANDIN, *op. cit.*

The color of the cheek varies much, both as a direct result of the passions and from special diseased conditions, which have been mentioned previously in this article. In fear and envy, the cheek is usually pale and colorless, while in love, embarrassment, or anger it is often uncommonly red. To the physiologist, these changes are a beautiful exhibition of the sympathy which exists between the mind and the circulatory and respiratory systems, which are seldom influenced except simultaneously. The changes in the cheek which affect expression, like the respiratory motions, depend chiefly upon the influence of the facial nerve; and thus it is that children and females, in whom the nervous system is generally more susceptible to impressions, also present, to the greatest degree, more or less transient modifications of the cheek. The cheek suffers a diminution in its fat as age advances, and when the teeth have been lost the approximation of the jaws forces the redundant cheek outward; and its flaccidity, from the loss of fatty tissue, throws it into folds, which are not present in the face of the infant.

The cheek approaches a triangular form in the infant, but it becomes quadrilateral when the teeth are developed; and in the old man, as the teeth are lost, it again returns to the triangular form as in infancy. The fact that the maxillary sinus is very imperfectly developed in the child, and gradually increases as age advances, explains to a great extent why the triangular form tends to become quadrilateral; and the frequency of abnormal protrusions of this region is explained by growths or the accumulation of fluid within this cavity. The changes in the cheek produced by advancing years are also illustrated in its color. In the child, the bright rose tint, which accompanies exertion and frequently the hours of sleep, bespeaks health and general activity; but in adult age this coloring tends to disappear, and in old age the cheek often assumes a striated redness, which is due to an abnormal dilatation of the capillary vessels, especially the veins. The vascularity of the cheek renders the occurrence of erectile tumors common in this region; and the elasticity of the tissues affords an anatomical explanation of the little disfigurement which follows the removal of large portions of the cheek, in case surgical interference is demanded from any cause.

---

* *Op. cit.*, Hunter's edition.

THE LIPS.—Certain deformities of the face are common in the region of the lips and mouth. Among these may be mentioned the condition of deficient closure, which is the normal condition of the hare, and to which the term "hare-lip" is applied. This deformity may be associated with that of fissure of the hard palate, and often with imperfect development of the soft palate; and thus not only is the countenance impaired, but the power of sucking, natural to the infant, is destroyed, and the articulation of words is subsequently rendered imperfect. The vascularity of the lips renders the development of erectile tumors of this region not infrequent; while hypertrophy of the tissues forming the lips may occur as one of the types of facial deformity.

The lips of the young child are very much longer in proportion to the face than those of the adult, and their increased length renders the act of sucking easier to the infant than if the teeth were present, since the lips can be made almost to cross each other and thus closely embrace the nipple. When the teeth are formed, the excessive length of the lips diminishes, and the expression of the face is thus greatly altered; while, in the old man, as the teeth are lost, the lips again become very long, which accounts for their projection forward when the mouth is closed, and which gives to the face of those advanced in years the peculiar pouting expression so often seen.* The excessive length of the lips in the aged furthermore acts as a hindrance to mastication, and often renders the articulation of words extremely indistinct.

In sickness, if the angle of the mouth be depressed, pain and languor may be read; and, when the corrugator supercilii muscle coöperates with the depressor muscles of the mouth, acute suffering is proclaimed.*

---

* BLANDIN, *op. cit.*

Extreme pallor of the lips is observed in excessive hæmorrhage, in purpura, in chlorosis, etc.; deep lividity denotes a defective oxygenation of the blood, and occurs chiefly in diseases of the lungs, heart, and larynx; while pale lividity occurs in cases where the circulation of the surface is languid or imperfect.† In painful affections of the abdominal organs, the upper lip is usually raised and stretched over the gums or teeth, so as to give a diagnostic expression to the countenance, which is considered by some as of great value. In anasarca of the face, the lips, eyes, and cheeks are most affected, since the subcutaneous cellular tissue in these regions admits of distention more readily than in those regions where it is not so loose.

DEFORMITIES OF THE FACE.—Among the extraordinary deformities of the orbital region, may be casually mentioned those rare cases of absence of the eyes, and the union of the two orbits, as reported by Tenon and Bartholine. The eyelids may also be found deficient or united at birth; and occasionally turned in or out, when the skin and the conjunctiva are of unequal length. The last type of deformity is most frequently the result of cicatrization of the tissues of the face, following an injury; while adhesions of the eyelids to the globe of the eye may be either a congenital defect or the result of inflammatory processes. The pupils may be absent at birth, or may be partially incomplete;‡ while deformities of this aperture may also be acquired as the result of adhesions between the iris and the cornea or the crystalline lens, or as the result of an operation in which portions of the iris are excised for the relief of glaucoma.

The entire absence of the face at the time of birth has been recorded by Lecart, Curtius, and Béclard; while in numerous instances the median portions of the face have been absent, or the existence of deep central fissures in the face has been detected. Cases are on record where all evidences of the existence of the nostrils are absent, termed "anarina"; those where the mouth has been found absent, termed "astomia"; and those where a double nose has existed, as recorded by Béclard. In these abnormalities, as in those where the cranium has been partially or totally wanting, an arrest of the process of development at an early stage of fœtal life must have occurred, the date of which in pregnancy may be roughly estimated by the extent and situation of the deformity. In cases of senile atrophy of the forehead, the bones are sometimes completely absorbed, and hernia of the encephalon may thus spontaneously be produced.

---

* CORFE. † MARSHALL HALL, *op. cit.* ‡ BLANDIN, *op. cit*

Tumors of the face always create a deformity, which is confined to the anatomical region affected; some of which have already been referred to in this article in the treatment of certain of the special features. Many conditions of the face, which may properly be spoken of as deformities, are dependent upon disease. Some of those which affect the eye and its appendages, and others which are due to injury of nerves or to disease of nerve centers, will be described later on, among the special types of physiognomy which are of interest in their bearing upon general diagnosis. Severe types of ulceration, as it occurs in lupus and carcinoma, often create so extensive a destruction of tissue as to give rise to hideous deformities, but they have no special bearing upon the diagnosis of the existing disease.

SPECIAL TYPES OF FACE.—Many of the specific forms of disease have their special physiognomy. As examples of this fact, scrofulous children inherit either a velvety skin, dark-brown complexion, dark hair, dark brilliant eyes, and long lashes, with the lineaments of a face finely drawn and expressive; or a fair complexion, thick and swollen nose, broad chin, teeth irregular and developed late, inflammation of the Meibomian glands, scrofulous ophthalmia, eruptions of the head, nose, and lips, and enlarged cervical glands.*

Hippocrates† describes a characteristic expression, which has been called from him the "facies Hippocratica," in which the eyebrows are knitted, the eyes are hollow and sunken, the nose is very sharp, the ears are cold, thin, and contracted, with marked shriveling of the lobules; the face is pale and of a greenish, livid, or leaden hue; and the skin about the forehead is tense, dry, and hard. This type of countenance is a most frequent indicator of impending death from chronic dis ease, or in an acute form of disease which has been unusually prolonged.

---

* WILLIAMS, *op. cit.*

† "Prognostics" (Adams's translation).

The "facies stupida" is distinguished by a dullness of expression, which is its chief characteristic. A peculiarity exists as regards the eyes, which are extremely dull, and resemble those seen in alcoholic stupor. This type of countenance is identical with the so-called "typhoid face," since it is most frequently met with either in connection with typhoid fever or with the typhoid condition associated with some other disease.*

Another type of countenance to which attention is frequently drawn is called the "pinched countenance." It can be produced artificially by exposure to cold, and is characterized by an apparent decrease in the size of the face, with a contracted and drawn expression of the features, and pallor or livid color of the skin. It is said to exist most frequently in the course of acute peritoneal inflammation.

In the long list of diseases which tend to shut off the supply of air to the lungs more or less suddenly, and in those accidents, such as choking, strangulation, smothering, drowning, etc., where the same effect is accomplished, the symptoms of apnœa are manifested in the face by flushing and turgidity, at first, and, later on, by a livid and purplish color. The veins of the neck become markedly swollen, and the eyes seem to protrude from their sockets. A loss of consciousness, and possibly convulsions, precedes death.†

The countenance of extreme anæmia is seen in those cases where, from sudden or gradual hæmorrhage, the prognosis is rendered alarming. The phenomena which attend this mode of dying are pallor of the face, with a peculiar leaden or clay-like hue,‡ cold sweats, dimness of vision, dilated pupils, a slow, weak, irregular pulse, and speedy insensibility. With these symptoms are frequently conjoined nausea, restlessness and tossing of the limbs, transient delirium; a breathing which is irregular, sighing, and, at last, gasping; and convulsions before the scene closes.

---

* FINLAYSON, "Clinical Diagnosis." Philadelphia: H. C. Lea, 1878.

† WATSON, "Practice of Physic" (Condie's edition).

‡ Sir CHARLES BELL, *op. cit.*

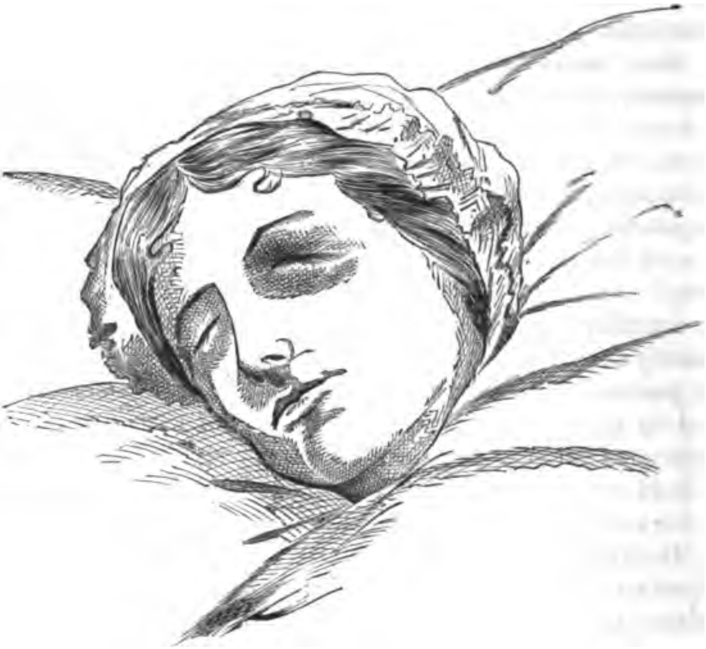


FIG. 7.—Face after Hæmorrhage. (Modified from Corfe.)

The expression of the countenance is typically marked in certain of the inflammatory diseases of the eye.* In strumous ophthalmia, the child's brow is knit and contracted, while the ala nasi and the upper lip are drawn upward. Those muscles which tend to exclude the light from the inflamed organ, without shutting out the perception of external objects, are called into action; thus producing a peculiar and distinctive grin. In severe cases, the child will sulk all day in dark corners, or, if compelled to stay in bed, will bury the face in the pillow, since the exclusion of all light tends greatly to diminish the suffering. If brought to the window, the eyes are shaded with the hands or the arms; and, if the eye be opened, a profusion of hot, scalding tears will enter the nose and give rise to sneezing, or flow over the face and cause excoriation of the adjoining parts. This special intolerance of light seems to be a chief characteristic of this type of trouble, since it is often greatly out of proportion to the redness which indicates the extent of the inflammation present. In catarrhal ophthalmia, the inflammation seems to be confined to the conjunctiva and the Meibomian follicles. The eyelids are glued together by the lashes, which are bathed in the excessive secretion of the conjunctiva or of the inflamed follicles; and a redness of the surface of the eye, with some pain and uneasiness, is the only other symptom of special diagnostic value.

---

* HAYNES WALTON, "Operative Ophthalmic Surgery." Philadelphia, 1853.

The deformity of iritis is characterized by a redness of the sclerotic; a change in the color of the iris, and in its general appearance, as compared with the healthy eye; an irregularity in the pupil, produced by adhesion of the iris to the adjacent structures; possibly immobility of the pupil, as the result of such adhesions; and a visible deposit of coagulable lymph. The pupil, in acute iritis, seldom dilates in the dark, on account of the intense congestion which exists;* and it is usually smaller than that of the unaffected eye. Some pain and excessive photophobia are usually also present in attacks of acute iritis. There is something very peculiar in the expression of the countenance of a person suffering from amaurosis, by which alone the physician may almost recognize the disease. Such a patient enters a room with an air of great uncertainty as to movement; the eyes are not directed toward surrounding objects; the eyelids are wide open; and the patient seems gazing into vacancy. This unmeaning stare of the face is due, in great measure, to an absence of that harmony of movement and expression which results largely from the information obtained by the exercise of vision.† This seeming stare at nothing is not observed in patients who are blind in consequence of opacity of the crystalline lens or of its capsule,

---

* See the experiments of Mosso, quoted by Michael Foster.

† Watson, *op. cit.*

i. e., in consequence of cataract. They, on the contrary, while they can not see, still seem to look about them, as if they were conscious that the power of sight remained in the retina, although the perception of objects was shut out from it. Patients, afflicted with cataract, who can not detect the existence of a gas jet or a candle in a dark room, are not fit subjects for operation, as the existence of trouble behind the lens may safely be surmised; since the periphery of the lens seldom becomes opaque to such an extent as to prevent the perception of light by the retina, even if the outline of objects can not be perceived.

The countenance of chronic hydrocephalus is perhaps the most typical of any of the conditions to which the attention of the physician or surgeon is directed. In it, the frontal bone is tilted forward, so that the forehead, instead of slanting a little backward, rises perpendicularly, or even juts out at its upper part, and overhangs the brow. The parietal bones bulge, above, toward the sides; the occiput is pushed backward; and the head becomes long, broad, and deep, but flattened on the top. This, at least, is the most ordinary result. In some instances, however, the skull rises up in a conical form, like a sugar-loaf. Not unfrequently the whole head is irregularly deformed, the two sides being unsymmetrical. Some of these rarer varieties of form are fixed and connate; others are owing, probably, to the kind of external pressure to which the head has been subjected. While the skull may be rapidly enlarging, the bones of the face grow no faster than usual, perhaps not even so fast; and the disproportion that results gives an odd and peculiar physiognomy to the unhappy subjects of this calamity. They have not the usual round or oval face of childhood. The forehead is broad, and the outline of the features tapers toward the chin. The visage is triangular. The great disproportion in size between the head and the face is diagnostic of the disease, and would serve to distinguish the skull of the hydrocephalic child from that of a giant. In acute cerebral diseases, the countenance is either wild and excited, or lethargic and expressionless.*

---

* Sir CHARLES BELL, *op. cit.*

Thoracic affections are all accompanied by more or less change in the color of the face; whereas the alteration in the natural hue of the features is so slight in abdominal diseases, that both the intellect and the complexion remain unaltered up to the final struggle, though the pinched and dragged features express the acute sufferings of the patient. In pneumonia, the countenance is inanimate; the cheek, of a dusky hue, with a tinge of red; the eyelid droops over the globe; the brow is overhanging; the lips are dry, herpetic, and of a faint claret color; the chest is comparatively motionless, but the abdomen exhibits evidences of activity; the skin is hot; and the respiratory acts are usually about double the normal number, while the pulse is markedly accelerated. In cases where the dyspnœa is extreme, the patient, entirely regardless of what is going on about him, seems wholly occupied in respiring; is unable to lie down, and can scarcely speak; and the face becomes expressive of the greatest anxiety, while the expanded nostrils and their incessant movement indicate pulmonary distress.

In emphysema, the face is not only dusky but anæmic; the eyes are wide open, as the patient gazes at you; the dusky redness of the lips bespeaks the lack of proper oxygenation of the blood; the neck is thrown backward, and the mouth is slightly open, while the cheek is puffed out during the expiratory act; the distended nostril and the elevated brow stamp the case as one of dyspnœa; while the coldness of the skin shows that no acute inflammatory condition is present. If we see, in addition to these facial evidences of disease, the deformity of the chest which has been termed the "barrel-shaped" thorax, the shrugged shoulders, and the absence of that expansive movement so well marked in normal respiration, auscultation and percussion can hardly make the diagnosis more positive.

There are certain facial conditions, which so clearly tell, to the student of physiognomy, of the existence of that most prominent sign of many pulmonary and cardiac diseases, dyspnœa, that it may be well to enumerate the alterations from the normal countenance which chiefly indicate this condition. In all cases where dyspnœa is present, the brows will usually be found to be raised; the eyes will be full, staring, and clear; the nostril will be dilated, and often it may be seen to move with each respiratory act;* the mouth will commonly stand partly open, while its angles will be drawn outward and upward; the upper lip will be elevated, so as to show the margins of the teeth; and the utterance of the patient will be monosyllabic, as the rapidity of breathing renders the utterance of long sentences a matter of extreme difficulty. When we add to these symptoms those of imperfect oxygenation of blood, as is met with in all conditions where the free entrance of air is in any way interfered with, we can better understand how the clear eye becomes stupid, as coma ap-

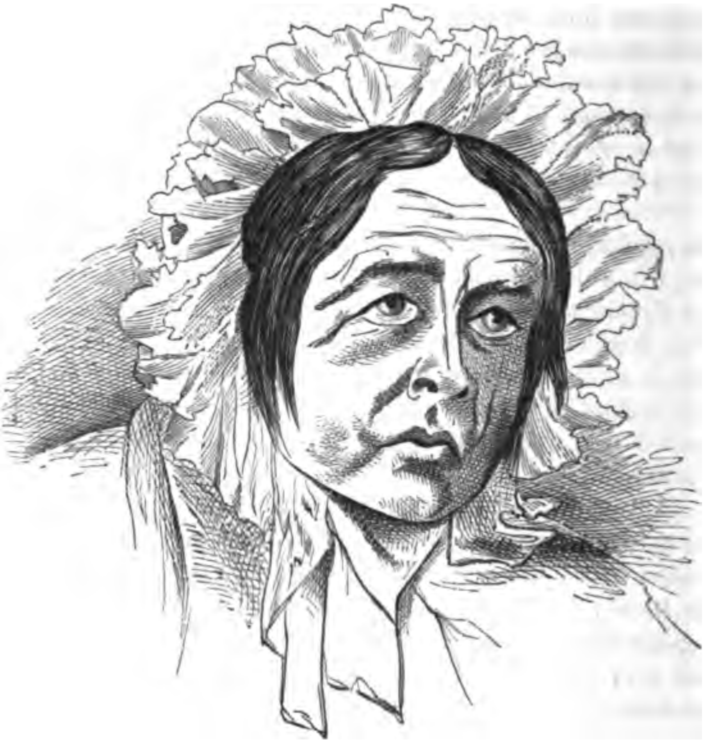


FIG. 8.—Countenance of Emphysema. (Modified from Corfe.)

---

* LAVATER, *op. cit.;* Sir CHARLES BELL, "Anatomy of Expression."

proaches, from the carbonic-acid poisoning, and the face cyanotic from the venous tinge of the blood. It thus becomes possible for the student to picture to himself the countenance which must exist in such conditions as acute laryngitis, spasmodic and true croup, thoracic tumors which cause pressure upon the lungs or the trachea, and the various conditions of the lung itself, which impede the entrance of air to the organ, but which are not of inflammatory origin, and which have, for that reason, no distinctive physiognomy.

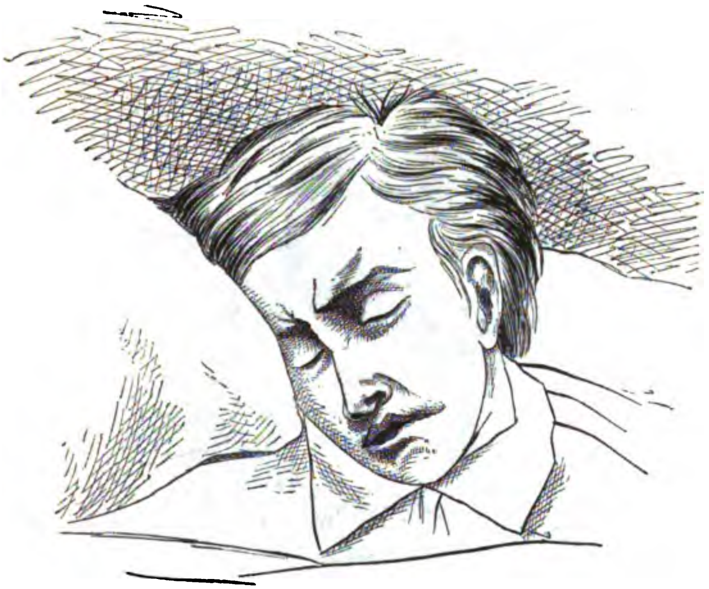


FIG. 9.—Cardiac Dyspnœa. (Modified from Corfe.)

In cases where renal dropsy has stamped its characteristic marks upon the countenance, we may perceive the signs of dyspnœa, due to the accompanying œdema of the lungs, in the corrugated forehead, the raised eyebrow, the dilated and waving nostrils; the corners of the mouth will be found to be drawn downward and outward, expressive of some disease of the abdominal cavity; the eye will be full and anxious, indicative of suffering long continued and borne with patient calmness; the conjunctiva may present that pellucid and bleb-like condition, so often seen in this type of disease, and an œdema of the eyelid may greatly alter its appearance; finally, the waxy pallor of the complexion and the pasty and bloated cheeks show the profound anæmia of the patient.

Chronic diseases of the abdominal cavity are usually characterized by a languor of the eye and by an absence of that flash of alarm so peculiar to the acute forms of abdominal trouble;* and, if attended with steadily increasing danger to life, the corrugated brow and eyelid, the retraction of the cheek, the dragged and elongated nostrils, the depressed angles of the mouth, the protruded chin, and the parted lips, with the teeth firmly clinched behind them, still further proclaim the seat of the disease.†

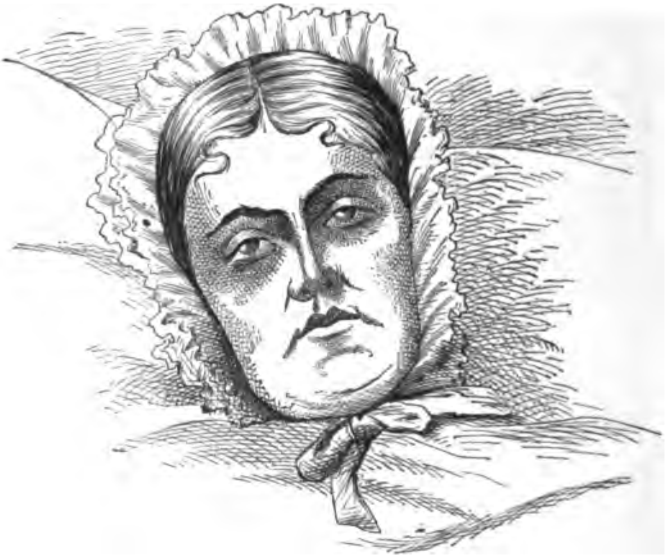


FIG. 10.—Face of a Patient with Obstruction at the Pyloric Orifice.

The pale face, stamped with the signs of anxiety and distress; the head raised upon two or three pillows, and the trunk similarly supported; the knitted brow, which bespeaks the cerebral disturbance; the nostrils, waving to and fro with each breath; and the jugulars which, as they lie exposed in the throat, show that the valves of the heart are acting imperfectly, by their pulsation or unusual distention; all may

---

* CORFE, *op. cit.*

† M. LOUIS, quoted by Marshall Hall, *op. cit.*

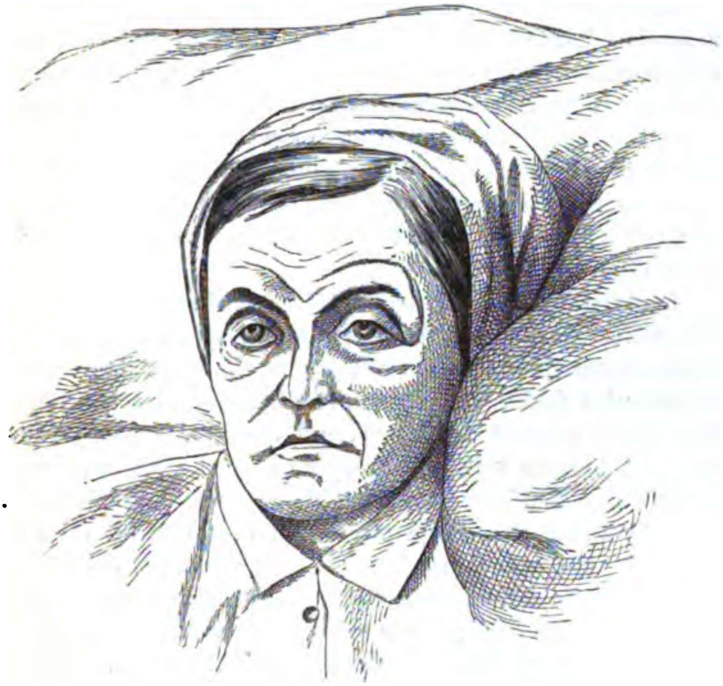


FIG. 11.—Cancer of the Abdominal Cavity. (Modified from Corfe.)

be found in endocardial or pericardial inflammations, or in conditions of the heart dependent upon chronic valvular disease. *

The countenance of continued fevers is liable to receive a modification from their complication with some morbid affection of the head, the viscera of the thorax, or of the abdomen; the dejection produced by the latter of which is among the most important objects in the clinical study of these diseases.† In scurvy, the dirty ashy hue of the skin and its characteristic dryness; the blue and bleeding gums; the emaciation and

---

* CORVISART, "Diseases of the Heart," Gates's translation. Boston, 1812.
† MARSHALL HALL, *op. cit.*

the frequent indurations of the inter-muscular tissue of the cheeks; the sunken eyes, surrounded by a blue ring; and the livid tinge of the lips, make the diagnosis positive at once.

In Graves's, or Basedow's, disease, a peculiarity of the eye is produced, due to its partial protrusion from the orbit, probably from an increase of the intra-orbital fat, which stamps the disease beyond a possibility of error in diagnosis. In many cases, the inability to approximate the lids, and an absence of power to move the eye, on account of the paralysis of the muscles from the stretching which they have undergone, furnish evidence also of disease of that organ which enhances the facial deformity.

In Asiatic cholera, and in children during attacks of profuse diarrhœa, the eyeballs sink into the orbit, a dark ecchymosis appears in the region of the eyes, the lower eyelid forms a prominent fold in the region of its attachment to the cheek, the nose is pointed and sharp, and the lips, normally ruddy and full, become thin and sharply outlined. These changes are chiefly dependent upon a rapid emaciation, which follows the withdrawal of a large proportion of the water from the tissues.* In chronic atrophy, the entire absence of the adipose tissue in the subcutaneous structures causes the skin to become loose and corrugated; while various muscles become prominent from contraction (chiefly the frontalis, the corrugator supercilii, and the levator labii superioris).† Thus the so-called "senile face" or "Voltairean countenance" is produced, which is seldom to be mistaken in the child.‡

Among the diseases of the nervous system, there are certain types of physiognomy which are so characteristic as to be of the most positive value in diagnosis. Thus, in the attacks of epilepsy, the neck at first becomes twisted, the chin raised, and brought round by a series of jerks toward one shoulder. The features are greatly distorted. The brow is knit; the eyes are sometimes fixed and staring, at other times rolling about in the orbit, and again turned up beneath the eyelid, so that the cornea is covered and only the white sclerotic is to be seen; the mouth is twisted to one side and distorted; the tongue is thrust between the teeth, and, caught by the violent closure of the jaws, is bitten, often severely; and the foam which issues from the mouth is reddened with blood. The turgescence of the face indicates obstruction of the venous circulation; the cheeks become purplish and livid, and the veins of the neck are visibly distended.

---

* VOGEL, *op. cit.* † MARSHALL HALL, *op. cit.* ‡ VOGEL, *op. cit.*

The expressions of the countenance which are produced by paralysis of any of the special nerves of the face have striking peculiarities which enable the skillful anatomist to easily detect the nerve affected. It is important to remember that, if paralysis of any nerve be the result of any form of external injury, a danger is presented in the form of tetanus, which should be guarded against by a quick comprehension of the existing malady and by all known precautions, applied with judgment based on the anatomical course and relations of the nerve affected. It is also well to bear in mind the fact, that any form of severe external violence about the face may, by causing a fracture of the bones through transmission of the force applied, cause injury to some special nerve whose course may lie far distant from the apparent seat of injury. It is not infrequent to find a fracture of the superior maxillary bone followed by symptoms indicative of a foreign body within the cavity of the antrum; and symptoms of irritation of the nasal mucous membrane, or of neuralgia of some of the principal nerve trunks distributed to the face, may likewise follow such an accident. Violence to the vault of the skull may produce not only cerebral lesions and their subsequent evidences in the face and body, but also types of local paralysis,* produced by injury to some of the more important nerve trunks at their point of escape from the skull, in case the base of the skull has been injured.

"A slight tremor of the lips; a hesitation of utterance; a partial loss of power over the lips and tongue, which seem to have lost their grip, as it were, over the consonants; a characteristic stillness of all the muscles of expression; and a slight disparity in the pupils are the predominant features of the early stage of development of the general paralysis of the insane."[*] In those rare cases where the facial nerve of both sides is impaired, symptoms similar to those mentioned above exist, except that the tongue has its normal capabilities of movement, save in the perfect articulation of the labial consonants only, and that a complete absence of facial expression is present. An open mouth; a loss of control over the saliva, which constantly dribbles; an awkwardly moving or motionless tongue; and an indistinct articulation render the labio-glosso-laryngeal paralysis of Trousseau and Duchenne easy of detection.[†] In the so-called Bell's paralysis,[‡] which has been described in previous pages of this article, the patient can not laugh, weep, or frown, or express any feeling or emotion with one side of the face; while the features of the other may be in full play. One half of the aspect is that of a sleeping or dead person; while the other half is alive and merry. This incongruity would be ludicrously droll, were it not so frightful and distressing.

---

* HOLDEN, *op. cit.*

During the fit of exacerbation, in an attack of tetanus, the aspect of the sufferer is sometimes frightful. The forehead is corrugated and the brow knit, thus expressing the most severe type of bodily suffering; the orbicularis muscle of the eye is rigid, and the eye itself staring and motionless; the nostril is widely dilated, indicating the extreme dyspnœa; the corners of the mouth are drawn back, exposing the teeth, which are firmly clinched together; and the features, as a whole, have a fixed and ghastly grin—the so-called "risus sardonicus." During such paroxysms, as in those of epilepsy, the tongue is liable to become protruded between the teeth and to be severely bitten.

In chorea, the facial muscles participate in the general eccentricity of movement. Watson[§] thus describes the peculiarities of this strange affection: "The voluntary muscles are moved in that capricious and fantastic way in which we might fancy they would be moved, if some invisible mischievous being, some Puck or Robin Goodfellow, were behind the patient and prompted the discordant gestures. With all this, the articulation is impeded: there is the same perverse interference with the muscles concerned in the utterance of the voice. By a strong figure of speech, the disorder might be called 'insanity of the muscles.'"

---

[*] W. H. GAIRDNER, Article on "Medical Physiognomy," in Finlayson's "Clinical Diagnosis."

[†] FINLAYSON, *op. cit.*

[‡] Sir CHARLES BELL, *op. cit.*

[§] *Op. cit.*

In catalepsy, the patient lies often with eyes open and staring, yet without expression indicative of life; more like a wax figure or a corpse than like a living subject. The features may be made to assume any expression, no matter how absurd, as the tissues have their normal pliability; and they will remain so placed until again mechanically altered. This same peculiarity is also present in the muscles of the extremities, and forms one of the distinguishing tests of the disease. The mental faculties are in abeyance, and all power of voluntary motion is lost. The sensibility of the body seems also to be lost.

The deformities of face and intellect which seem to be the result of residence in special atmospheric conditions, or of certain well-defined localities, are illustrated in that race of people found in Valais and the adjoining cantons of Switzerland, called "cretins." Many of these wretches are incapable of articulate speech; some are blind, some are deaf, and some suffer from all of these privations. They are mostly dwarfish in stature, with large heads, wide vacant features, goggle eyes, short crooked limbs, and swollen bellies. The worst of them are insensible to the decencies of Nature, and in no class of mortals is the impress of humanity so pitiably defaced. They are usually the descendants of parents afflicted with goître.

In that long list of pathological conditions in which the brain may be subjected to more or less compression of its substance, there are certain signs of positive value in diagnosis which may often assist the medical practitioner to locate the disease. Thus, in depressed fracture of the inner table of the skull, where the signs of external injury are absent; in abscess within the cranial cavity, during the course of meningeal inflammations; in apoplexy; in the development of intra-cranial tumors, etc., the eyelids will usually be closed and immovable; the pupils generally dilated or irregular, and always sluggish and less sensible to light than in health; the breathing will be slow and stertorous if coma exists; the special senses will be in abeyance; and the temperature will be either normal or increased. The evidences of a paralyzed condition of certain of the cranial nerves may also exist, and thus afford an additional means of determining the exact seat of the disease. A rigidity of certain muscles, if present, denotes some special irritation of the nerves which supply them, and it is, therefore, seldom present in cerebral softening, but frequently so in those cases where paralysis is produced by pressure upon nerve centers. In cases where the fifth cranial nerve has been impaired by pressure, injury, or disease, the prominent symptoms are a redness of the conjunctiva on the side of the face supplied by the affected nerve; insensibility of the cornea, nostril, and tongue on the same side; a dullness of hearing; a partial or complete loss of smell, sight, and

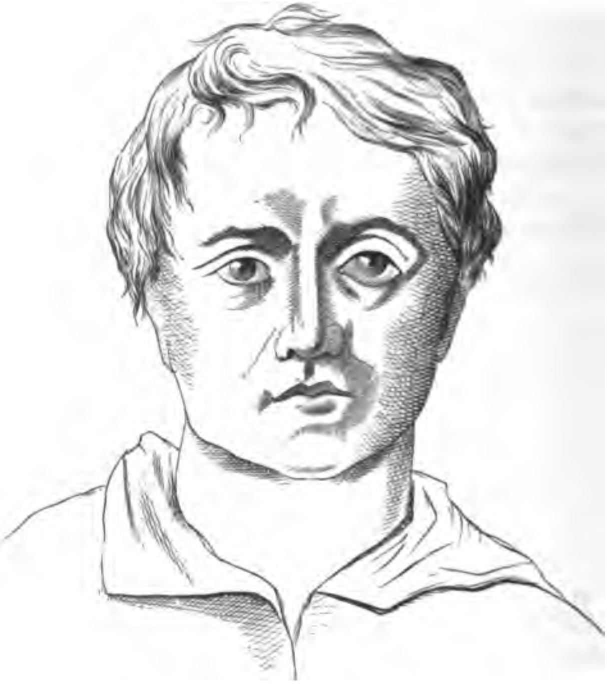


FIG. 12.—Partial Paralysis of the Facial Nerve from Disease near the Pons Varolii. (Modified from Corfe.)

occasionally of taste also in the anterior two thirds of the lateral half of the tongue; and a diseased state of the gums, similar to that observed in scurvy.

While many typical varieties of countenance, which are of value to the diagnostician, have been omitted, since the limits of a single article have possibly been already overstepped, still it is to be hoped that the facts mentioned, although they are but fragmentary jottings, may tend to kindle among the medical profession a renewed interest in a subject which is rapidly being lost sight of, and the value of which is often ignored. It is not to be expected that sight alone can guide the medical attendant to unerring diagnosis; but that it may prove of the greatest value *as an aid*, can not, I think, be disputed. It is to be remembered, however, that a direct perceptive faculty, like that of touch, hearing, or smell, *grows with use*, and is capable of unlimited development. As with the musician, an instrument which at first produced discords becomes, under skillful hands, one of melody; so the enlightened and accomplished practitioner may often see at a glance what, to one unaccustomed to note facial changes or to interpret their meaning, would escape detection, unless a special effort was made to note and record systematically the peculiarities of each particular feature and anatomical region of the face, and the records afterward studied, as the mariner studies his chart before he attempts to direct his vessel through channels with which he is not perfectly familiar.

ON THE MANAGEMENT OF THE SECOND STAGE OF NATURAL LABOR.*

By WILLIAM T. LUSK, M. D.,

PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN, AND OF CLINICAL MIDWIFERY, IN BELLEVUE HOSPITAL MEDICAL COLLEGE.

The management of the second stage of labor calls for considerable tact on the part of the medical attendant. It is incumbent upon him to make frequent examinations, to determine the degree of rapidity with which the descent of the head takes place. So long as the advance is regular, he should abstain from interference. Should the pains slacken, however, he should not allow the duration of the second stage to exceed the physiological limits. It is not easy to define exactly what is implied in the expression, "physiological limits." As a rule, a very rapid second stage is not physiological, as it endangers the integrity of the vagina and perinæum, and predisposes to post-partum hæmorrhage. Still, now and then labor is ended by a single pain after rupture of the membranes without detriment to the mother. Of course, such cases are extremely uncommon in primiparæ. They require an unusually distensible condition of the soft parts, and an extraordinary degree of resiliency in the uterus. On the other hand, pressure of the head, after its descent into the pelvic cavity, leads, if too long continued, to pathological changes in the tissues of the canal and of the outlet. It is usual, therefore, unless the head is small or the pelvis roomy, to use the resources of art to terminate labor, when the head remains stationary after two hours of effort at the perineal floor. It is desirable, therefore, when the pains are weak and ineffective, to make use of all the simple adjuvants which experience has shown to possess real efficacy in increasing the activity of labor.

---

* Extracted from the author's forthcoming work, entitled "The Science and Art of Midwifery." New York: D. Appleton & Co.

Changes of posture increase the power of the pains temporarily. When head flexion is incomplete, it has been recommended to place the patient upon the side toward which the occiput is turned. Others, again, claim that the descent of the occiput is best effected by placing the mother upon the side toward which the child's forehead is directed. In point of fact, either posture frequently leads to the desired result, simply because the change from the dorsal to the lateral position is apt to be followed by a temporary addition to the uterine force.*

In many women, owing to defective innervation or to insufficient development of the muscular structures of the uterus, it is of great moment that the expulsion of the child be aided by the voluntary pressure of the abdominal walls. To be sure, in most cases the reflex impulse to bear down is imperative, but in others, where the impulse is feeble, or held in abeyance by the dread of the patient lest she increase her sufferings, it becomes the duty of the physician, in tardy labors, to see to it that all the auxiliary forces are brought into play. To this end, he should instruct his patient to fix her pelvis, either by pressing her feet against the foot-board of the bed, or by drawing up her knees and resting them against an assistant, who assumes the position best adapted to furnish the requisite support. Then the nurse or other suitable person should grasp the woman's hands, so as to enable her to fix her thorax and to bring all the expiratory muscles into full exercise. Often, when the agony is intense, the patient can be induced to strain with her pains, if her sufferings are first dulled by small doses of chloroform. When the head is on the perinæum, the physician may further expulsion by rubbing the abdomen to excite pains, and by pressing upon the breech through the fundus.

---

* LAHS, "Die Theorie der Geburt." Bonn, 1877, p. 237.

During the second stage, the patient's posture should be left in general to her own volition. The physician should accustom himself to conduct labor with equal facility, no matter whether the woman lies upon her side or upon her back. The left lateral position, affected by English accoucheurs, is very convenient at the time of delivery, especially when there is occasion to support the perinæum, and when, owing to the flatness of the nates, the vulva is scarcely raised in the dorsal posture above the level of the bedding.

The Preservation of the Perinæum.—By far the most delicate task which the physician has to fulfill toward his patient, in the expulsive stage, consists in so regulating the exit of the child's head as best to avoid perineal lacerations. It is needless to state that such lacerations, unless of slight extent, entail upon women a variable degree of subsequent discomfort and suffering. When the perinæum is examined with care after labor, a practice which should be invariable with a conscientious attendant, the frequent occurrence of more or less extensive rupture of its tissues is a matter of easy confirmation. Statistics of their frequency are of little value, much depending upon individual skill in management.

Olshausen* reports, as the result of the preventive measures adopted at the Clinic in Halle during a period of ten years, 21·1 per cent. of perineal injuries in primiparæ, and 4·7 per cent. in multiparæ. These percentages did not include slight tears confined to the frænulum. He regards 15 per cent. as not too high an estimate for the absolutely unavoidable lacerations, due to defective distensibility of the perinæum and to the disproportionate size of the child's head.

The aim of prophylactic measures should be to develop the elasticity of the soft parts to the fullest practicable extent, and to cause the head to pass through the distended orifice of the vulva by its smallest diameters. Preliminary softening of the perinæum is best accomplished by the continuous, but not too rapid, descent of the presenting part. The relaxation, as a rule, begins earlier and is more complete in multiparæ than in primiparæ. In a few cases, the soft parts will already have ceased, by the end of the first stage of labor, to offer any effective barrier to delivery. The distensibility of the soft parts may be fairly inferred from the presence of a copious discharge of glairy mucus. When rupture takes place, the vaginal mucous membrane is the first structure to give way. In the ordinary form, the perineal body tears from the commissure backward to the rectum. In rare cases a central perforation may result, and the child be delivered through a rent situated between the vulva and the anus.

When the head begins to make the perinæum bulge, the physician should be on the alert, and inform himself during each contraction of the strain to which the parts are subjected. At first, it is only necessary to rest the hand lightly upon the perinæum. Direct pressure is to be avoided, except when the perinæum is stretched to a membranous thinness, and the danger of central perforation threatens. As the head begins to distend the vulva, the tension at the frænulum should be carefully gauged by a finger introduced between the labia. Measures to avert rupture may be classified under three headings, viz.: 1. Those designed to check the exit of the head before the fullest expansion has been secured, and to prevent expulsion during the acme of a pain, when the borders of the orifice are most rigid; 2. Measures which impart an upward movement to the head, with a view of making all unoccupied space beneath the arch of the pubes available; 3. Measures which favor expulsion during the interval between the pains, or at least after the acme has subsided.

---

* OLSHAUSEN, "Ueber Dammverletzung und Dammschutz." Volkmann's "Samml. klin. Vortr.," No. 41, p. 360.

In ordinary cases, Hohl's method, recommended by Olshausen,* has rendered me excellent service. It consists in applying the support, not to the perinæum, but to the presenting part. To this end, the thumb should be applied anteriorly to the occiput, and the index and middle fingers posteriorly upon that portion of the head which lies nearest to the commissure. The unconstrained position of the hand enables the operator to exercise effective pressure in the direction of the vagina, while the posterior fingers favor the rotation of the head under the pubic arch. The patient should at the same time be directed not to hold her breath during the pains, except when they are weak and powerless. Where the impulse to bear down is irresistible, chloroform should be given to annul the excessive reflex irritability. Under the most skillful management, laceration is liable to occur unless the physician is able to control the action of the auxiliary expulsive forces.

So soon as the biparietal diameter passes the tense border of the vulva, the perinæum retracts rapidly over the face, and the delivery of the head is completed. It is during this period that laceration is most apt to occur. The danger is, however, greatly lessened, if the head is made to issue through the orifice after the pain has subsided, and when the soft parts are in a relaxed and dilatable condition. To accomplish this, in many instances where the resistance to be overcome is slight, it is sufficient for the woman to hold her breath during an interval between the pains, and voluntarily call into play all the muscles of expiration. In the larger proportion of cases, however, these efforts are futile, because of the comparatively feeble motor force brought into action.

---

* *Loc. cit.*, p. 866.

An excellent method of manual delivery we owe to Ritgen,* which consists in lifting the head upward and forward through the vulva between the pains, by pressure made with the tips of the fingers upon the perinæum behind the anus, close to the extremity of the coccyx. Of course, the method is only available after the head has descended sufficiently for the pressure to be exerted upon the frontal region.

Rectal expression has lately found warm advocates in Olshausen † and Ahlfeld.‡ The manœuvre consists in passing two fingers into the rectum toward the close of the second stage of labor, and hooking them into the mouth or under the chin of the child through the thin recto-vaginal septum. By pressing the face forward and upward, the normal rotation of the head beneath the pubic arch can be effected, and the delivery can be accomplished between the pains at the will of the operator.

When rupture is felt to be imminent, mock modesty should be discarded, and the parts imperiled should be unhesitatingly exposed to view. If, owing to its elasticity, the occiput, in place of being directed forward to the vulva by the perinæum, distends the latter so that central perforation threatens, the hand should be applied in such a way as to give direct support to the stretched tissues, and to guide the head upward to the outlet. If, on the other hand, the danger arises from defective elasticity, the physician, standing to the right of the patient with his face toward the foot of the bed, should pass the left hand between her thighs, and press the head upward and inward during each pain, with the thumb and two fingers, as previously described. At the same time, the movement of extension, should it threaten danger to the parts, should be hindered by pressing backward upon the frontal region through the perinæum with the disengaged hand.

Dr. Goodell § recommends hooking two fingers into the anus, and drawing the perinæum forward during a pain, to remove the strain from the thinned border of the vulva and to promote the elasticity of the tissues.

---

* See AHLFELD, "Das Dammschutzverfahren nach Ritgen." "Archiv f. Gynäkol.," vi, p. 279.

† *Loc. cit.*, p. 369. ‡ *Loc. cit.*

§ "Am. Jour. of the Med. Sci.," January, 1871.

Fasbender* places the patient upon the left side; then, standing behind her, he seizes the head between the index and middle fingers of the right hand, applied to the occiput, and the thumb thrust as far into the rectum as possible. By this manœuvre the head is held under complete control, the rectal wall hardly affecting the grip in any appreciable manner. During a pain the progression and extension of the head are readily prevented. During the interval between the pains, by pressure with the thumb through the rectum and the posterior portion of the perinæum, the head can be raised forward and upward at the will of the operator.

Between pains, I have been in the habit, in cases of rigidity, of alternately drawing the chin downward through the rectum until the head distends the perinæum, and then allowing it to recede. It is astonishing how often apparently the most obstinate resistance can be overcome by the simple repetition of this to-and-fro movement, the parts becoming rapidly soft and distensible. Of course, it should be discontinued the moment contraction begins, and care should be taken to effect delivery after uterine action has subsided.

With judicious management, the number of unavoidable lacerations can be restricted to a small proportion of cases. Still there are individual peculiarities which will now and then render abortive the best of prophylactic measures. In this category I have already alluded to a primitive lack of development of the maternal parts, to unusual size of the child's head, and to the excessive rigidity of the perinæum of primiparæ, especially after the thirtieth year. In addition should be mentioned, cases where the pubic arch is diminished by the approximation of the pubic rami, or where the tissues have been rendered friable from chronic œdema, from a varicose condition of the veins, from condylomata, from syphilitic sores, or from inflammatory infiltration consequent upon undue prolongation of the second stage of labor. Lacerations are more frequent in occipito-posterior positions, and in the delivery of the after-coming head, where hasty extraction is demanded in the interest of the child.

---

* "Zeitschr. f. Geburtsh. u. Gynäkol.," ii, 1, p. 58.

When, in the judgment of the physician, rupture of the perinæum seems inevitable, he is justified in making lateral incisions through the vulva to relieve the strain upon the recto-vaginal septum. To this operation the term episiotomy is applied. By it not only is the danger of deep laceration through the sphincter ani prevented, but, owing to their eligible position, the wounds themselves are capable of closing spontaneously; whereas, when laceration follows the raphé, the retraction of the transversi perinæi muscles causes a gaping to take place which interferes with immediate union. As, however, every wounded surface is a source of danger in childbed, episiotomy should never be performed so long as hope exists of otherwise preserving the perinæum. It is essentially the operation of young practitioners, the occasions for its employment diminishing in frequency with increasing experience. The chief resistance encountered by the head is not at the thin border of the vulva, but is furnished by a narrow ring, situated half an inch above, and composed of the constrictor cunni, the transversi perinæi, and sometimes of the levator ani muscles. Incisions should be made during a pain, when the ring becomes tense and rigid and is easily recognized with the finger. As it is not desirable that the head should be driven suddenly through the vulva during the act of operating, the time selected for performing episiotomy should be at the commencement or close of a contraction. The division of the rigid fibers may be accomplished by means of a blunt-pointed bistoury or a pair of angular scissors. So far as practicable, the incisions should be confined to the vagina, and should not exceed three quarters of an inch in length. In cases where the head is on the eve of expulsion, the bistoury may be introduced flat between it and the vagina, half an inch anterior to the commissure, and the section made from within outward. Care, however, should be taken at the same time to avoid severing the external skin, by drawing it as far back as possible.* In central perforations, it is best to divide the band left attached to the vulva, as its preservation is of no after-advantage.

---

* OLSHAUSEN, *loc. cit.*, pp. 372, 373.

THE EXPULSION OF THE SHOULDERS.—After the delivery of the head, mucus should be wiped from the mouth and nose, and cleaned from the throat with the finger, should laryngeal râles indicate an embarrassment of the respiration. If the cord is found coiled around the neck, it should be loosened by drawing upon the placental end until the shoulders can pass readily through the loop. Should this be found impossible, either because the cord is unusually short, or because it is wound several times around the body, a ligature should be applied, the cord should be cut between the ligature and the placenta, and delivery should be hastened by manual efforts.*

In the majority of cases the shoulders are expelled spontaneously. Still, it is a good plan to expedite the descent by pressure made with the left hand at the fundus of the uterus. Care must be taken lest the lower shoulder convert a slight tear in the perinæum into an extensive laceration. The right hand should therefore be applied to the perinæum in such a way as to lift the shoulder upward, and, at the same time, furnish a bridge over which it can glide in its movement forward. Sometimes, after the passage of the head, a deep vaginal laceration coexists with an intact condition of the external parts. The shoulder then tears through the skin, and a complete rupture ensues. Olshausen recommends, in cases where rupture is imminent, to turn the shoulders so that they clear the vulva one to the right and the other to the left.

If, after the expulsion of the head, the child does not breathe, and asphyxia threatens, the physician should rub the uterus with the hand through the abdominal wall, to excite a pain, during which he should urge the patient to press down, and thus aid expulsion. The most common hindrance to delivery consists in an arrest of the upper shoulder beneath the pubes. Usually its release is readily effected by seizing the sides of the head with the two hands and drawing directly downward. It is rarely necessary to raise the head subsequently, or to hook the finger into the armpit to extract the posterior shoulder.

---

* TARNIER recommends dividing the cord, and then compressing the proximal end between the thumb and the index finger. The proximal end is distinguished by the spurting of the two umbilical arteries.

TYING THE CORD.—When the cord is torn across, as sometime happens in street births, no hæmorrhage takes place from the lacerated vessels. Of course, this occurrence deprives the physician of the power of choosing the point at which the division shall be made. As it is desirable, for the sake of convenience, to sever the cord about two inches from the navel, it is the custom in all civilized countries to cut it with scissors, and to prevent hæmorrhage by the application of a ligature. Almost any material may be employed for the latter purpose, though nothing is so handy as the narrow flat bobbin which most nurses keep in readiness. The ligature should be applied tightly, and the cut surface should subsequently be examined once or twice by the physician before leaving, to make sure that the arteries are sufficiently compressed to prevent oozing from taking place. The cord should be held in the hollow of the hand at the time of its division, to avoid the possibility of including accidentally any portion of the child between the blades of the scissors. Commonly two ligatures are applied, and the cord is severed between them, though the question of one or two ligatures is, except in twin pregnancies, of trifling importance.

In practice, it is very desirable that the physician should understand the physiological difference between the effects of the early and those of the late application of the ligature. The custom, as regards this point, has been by no means uniform. The ancients deferred the ligature until after the expulsion of the placenta. Mauriceau, Clément, and Deventer followed the same plan, but employed artificial expedients to complete the third stage of labor rapidly.* The common practice of the present day is to tie the cord immediately after the birth of the child. Still, there have not been wanting in recent times warning voices against precipitate action. Nägele advised waiting until the pulsation of the cord had ceased; Braun † first describes the changes from the fœtal to the postnatal circulation, and then says: "This stupendous process should be taken into consideration in the treatment of every case of labor, and because of it the cord should never be severed or tied so long as pronounced pulsations can be felt near the navel"; Stoltz* remarks that, "after the child has respired well, division of the cord is followed by an insignificant loss of blood, while, after immediate section, blood escapes in abundance."

---

* BUDIN, "À quel Moment doit-on opérer la Ligature du Cordon Ombilical?" "Publications du 'Progrès Médical,'" 1876.

† "Lehrbuch der Geburtshülfe,'" p. 192.

In 1875 Budin, at that time *interne* at the Maternité of Paris, undertook the following experiments at the suggestion of Professor Tarnier: in one series the cord was tied immediately after the birth of the child, and the blood which escaped from the placental extremity was measured; in the other, the quantity of blood was determined in cases where the cord was not tied until several minutes after delivery. By a comparison of the results thus obtained, he found that the average amount of placental blood was three ounces greater in the first than in the second series of experiments. Welcker estimated the entire quantity of blood in the infant at one nineteenth the weight of the body, which would amount, in a child of seven pounds, to six ounces. To tie the cord immediately after birth would therefore be equivalent to robbing the child of three ounces of blood, which would otherwise pass into its circulation. This startling result has in the main been abundantly confirmed by subsequent observers. Two years later (1877), Schücking, extending Budin's experiments by weighing the child at birth, and then observing the changes that took place up to the time of the cessation of the placental circulation, found that the child gained from one to three ounces in weight by delay. It is certain that these amounts do not represent the entire increase, as a portion necessarily escapes observation in the interval that must elapse before the weight can be ascertained.

There is a difference of opinion as to the mechanism by which the transfer of the blood from the placenta to the child takes place. According to Budin, the principal factor in the accomplishment of the result is thoracic aspiration. With the first breath, the afflux of blood to the lungs develops a "negative pressure" in the vessels of the larger circulation, so that a suction force is exerted upon the placental blood, which continues until the equilibrium is restored. To tie the cord prematurely, therefore, is to cut off from the child a supply of blood, for which the establishment of the pulmonary circulation had created a physiological need.

---

* "Nouveau Dictionnaire," p. 283, art. "Accouchement Naturel."

Schücking,* on the contrary, maintains that after the first inspiration thoracic expansion ceases to operate as an active force, and that the main agent which drives the blood from the placenta through the umbilical vein is the compression exerted by the retraction, and, at intervals, by the contractions, of the uterus.

The difference in the theoretical standpoint of these two observers is of practical importance, for, if the movement of blood to the child results from thoracic aspiration, the quantity which enters its circulation will not exceed its requirements; while, if the movement is due to uterine compression, the question arises as to whether the forcible transfusion thus accomplished is compatible with the child's safety and welfare.

The ultimate decision will depend partly upon experimental and partly upon clinical observations. Provisionally, the case stands as follows: The manometric observations of Ribémont † show that the pressure in the umbilical arteries is uniformly greater than that in the umbilical vein; during a series of deep inspirations and expirations, the blood in the umbilical vein is subject to marked oscillations; after the pulsations of the cord have ceased, the uterine contractions alone are insufficient to propel the placental blood through the umbilical vein to the infant. Again, Budin (Discussion upon Ribémont's paper), in a breech delivery, compressed the cord at the vulva as far as possible from the navel; at birth, the vein was distended with blood, but with the first inspiration it was instantly emptied. Thoracic aspiration does, therefore, exist as an operative force. On the other hand, Schücking found that, when the placenta was rapidly expelled by Credé's method, so as to remove it from the influence of uterine retraction, the pressure in the vein was slightly lessened, and the total amount of blood transferred to the infant was greatly restricted.

---

* "Zur Physiologie der Nachgeburtsperiode." "Berl. klin. Woch.," Nos. 1 and 2, 1877.

† "Recherches sur la Tension du Sang dans les Vaisseaux du Fœtus et du Nouveau-né." "Arch. de Tocologie," October, 1879.

According to the clinical observations of Budin, Ribémont, and Schücking, infants which have had the benefit of late ligation of the cord are red, vigorous, and active, whereas those in which the cord is tied early are apt to be pale and apathetic. Hofmeier,[*] Ribémont, Budin, and Zweifel[†] have shown that the loss of weight which occurs in the first few days following confinement is less in amount and of shorter duration when the cord is not tied until after the pulsations have ceased.

There appear to be no harmful results to the child growing out of the practice of late ligation. Porak, indeed, reports two cases of dark vomiting, two of melæna, and two with sanguineous discharges from the vagina, which he is convinced were the result of the practice; but the extensive trial to which it has since been subjected in the principal lying-in institutions of the continent has sufficiently demonstrated that it is exempt from danger.

In late ligation, the amount of blood retained in the placenta and the increase in the weight of the child differ materially in different cases[‡]—a difference which seems to indicate that, so long as the placental circulation is left undisturbed, the amount of blood passing to the child will be measured by its needs. In a case of Illing's,[§] on the other hand, after the placenta had been expressed from the uterus, its contents and that of the cord were forcibly squeezed into the circulation of the child, and death followed from overdistention of the heart. Porak and Georg Violet[‖] claim that there is a special predisposition to icterus in children when the cord is tied after the placental circulation has ceased. Violet attributes the discoloration, not to bile pigment, but to a rapid disintegration of the excess of blood-corpuscles. Helot, he says, found, on the first day after birth, a difference of 900,000 corpuscles to the cubic millimetre between cases of late and those of early ligation, while on the ninth day the difference fell to 300,000. Others have failed to notice any characteristic icteric discoloration peculiar to late ligation. Neither Porak nor Violet attaches any pathological significance to the symptom.

---

[*] "Der Zeitpunkt der Abnabelung," etc. "Zeitschr. f. Geburtsh. u. Gynäkol.," iv, 1, p. 114.

[†] "Centralbl. f. Gynäkol.," No. 1.

[‡] See WIENER, "Ueber die Einfluss der Abnabelungszeit auf den Blutgehalt der Placenta," "Arch. f. Gynäkol.," xiv, 1, p. 85; also, MEYER, "Centralbl. f. Gynäkol.," 1878, No. 10.

[§] "Inaug. Diss." Kiel, 1877.

[‖] GEORG VIOLET, "Ueber die Gelbsucht der Neugeborenen und die Zeit der Abnabelung." Virchow's "Archiv," lxxx, 2, p. 353.

The outcome of the foregoing observations may fairly be stated as follows:

1. The cord should not be tied until the child has breathed vigorously a few times. When there is no occasion for haste arising out of the condition of the mother, it is safer to wait until the pulsations of the cord have ceased altogether.

2. Late ligation is not dangerous to the child. From the excess of blood contained in the fœtal portion of the placenta, the child receives into its system only the amount requisite to supply the needs created by the opening up of the pulmonary circulation.

3. Until further observations have been made, the practice of employing uterine expression previous to tying the cord is questionable.

4. In children born pale and anæmic, suffering at birth from syncope, late ligation furnishes an invaluable means of restoring the equilibrium of the fœtal circulation.

AN ANALYSIS OF ONE HUNDRED AND FORTY CASES OF EXCISION OF CANCER OF THE RECTUM.

BY CHARLES B. KELSEY, M. D.,
SURGEON TO THE INFIRMARY FOR DISEASES OF THE RECTUM, NEW YORK.

THE treatment of cancer of the rectum by excision has not yet been accepted by the surgical world as a substitute for other measures, even in cases best adapted for the operation, although it can not be denied that a radical cure has sometimes been obtained, and that in many other cases life has been prolonged beyond what could have been hoped for by any other means of treatment. It is no less true that the operation is one of great danger, and that there are not lacking those whose experience has led them to believe that life was rather shortened than lengthened by it. By these it is claimed that in lumbar colotomy we have a safer method of relieving pain, and delaying the progress of the growth, and in both these ways prolonging life. American and British surgeons hold rather to this latter idea, while the French and the Germans favor excision.

Again, lumbar colotomy has been tried many times. It is comparatively safe of performance, and in the vast majority of cases it gives a certain amount of relief; while in excision the surgeon is treading on newer and less certain ground. The operation itself is surrounded with dangers. He fears either immediate death for his patient, or a speedy return of the disease; and he turns to the more common treatment with the reliance that he is pretty sure to do *some* good to the sufferer, and leaves the newer ground for more venturesome operators.

There are several questions yet to be answered concerning excision of the rectum for cancer, and most of them can only be answered by experience. For the purpose of arriving at a knowledge of what experience has already taught in this matter, I have collected the reports of operations up to the present time as far as they are attainable. I can only regret, in passing, the incompleteness of the record in many of the published cases—an incompleteness depriving them of much of the value they would otherwise possess. It amounts to very little, in the consideration of a question such as this, to know that a patient of a certain age had some kind of cancerous disease in the rectum, that some sort of an operation was done, and that in a certain number of days or weeks the patient died or left the hospital with the wound more or less cicatrized and with more or less control over the fæces; and yet in a large proportion of the following cases this is the total amount of information to be derived.

I have, however, tried to glean all that could be gathered from the material in our hands, and submit it as it stands, subject to any modifications which a larger collection of better reported cases may make necessary.*

The questions for which a solution has been sought are chiefly these. What are the dangers, and what is the mortality of the operation? to what class of cases is it applicable? what are its results as a curative and as a palliative measure? how do these results compare with those of lumbar colotomy? and, finally, the results as to the control of the fecal evacuations.

Considering the operation, first, merely as a surgical procedure, we find that in twenty-two cases death followed as a direct result of the interference. The causes of death, in their order of frequency, were: peritonitis, ten; pelvic cellulitis and phlebitis, four; septicæmia, three; exhaustion, three; hæmorrhage, one; and erysipelas, one. Of these fatal results, four were due to accidents which may attend upon any surgical operation, viz., those due to erysipelas and exhaustion; and the others were from causes having their origin in the peculiar nature of this operation and the parts operated upon. Considering these alone, we find the three great dangers of the operation to be peritonitis, pelvic cellulitis, and septicæmia. The single death from hæmorrhage in one hundred and forty operations may, I think, fairly be dropped out of consideration, especially as the operation may, if desired, be rendered almost bloodless by the use of the écraseur or galvanic cautery.

I have tried to discover whether there was anything in the nature of the individual cases which were fatal to account for that result, and we find that in thirteen of them in which these data are given the situation and extent of the disease are described in eight as follows: (1.) The inferior extremity of the rectum was completely surrounded with hard, knobby tumors encroaching upon each other, causing a stricture through which there existed scarcely any passage, and extending so high that their upper limit could scarcely be determined by rectal touch. The recto-vaginal septum was involved in the disease to such an extent as to render the isolation of the latter impossible. The peritonæum was opened. (2.) The anus was surrounded with carcinomatous nodules; the disease reached four inches into the rectum, and the mass was adherent to the sacrum, coccyx, and posterior wall of the vagina. (3.) The disease completely surrounded the anus, reached three inches up the rectum, and the inguinal glands were involved. The peritonæum was opened. (4.) The operation involved three inches of the rectum, and the peritonæum was wounded. (5.) The disease extended beyond the reach of the finger, and only a part could be removed. (6.) The rectum was completely surrounded for a distance of three inches. (7.) The disease began about six centimetres above the anus, was continuous on one side with a mass of the size of a hen's egg, which was fixed to the pelvic wall, and extended beyond the reach of the finger. The peritonæum was opened. (8.) Nine and one half centimetres were removed, and the peritonæum was opened.

---

* Instead of copying cases in full or preparing a table (troublesome both to writer and publisher, and very likely to be tiresome to the reader), I shall give at the close a list of the operators, with reference to the place of record. I have been at no exhaustive search to compile a *complete* list of operations, but have gathered together those best known and most easily attainable.

These cases seem to point to a very evident relation between the extent of the operation attempted and the fatal result; and I do not hesitate to say that in such extensive disease as this, where the removal necessarily involves the danger of wounding the peritonæum, the operation is contraindicated. It is true, not only that disease more extensive than any described in these fatal cases has been safely removed, but that the operation has been followed by a long period of health; and yet I can not regard such a result as other than exceptional, nor do I consider that the slight chance of obtaining it counterbalances the risk of immediate death. The surgeon is never compelled to this operation to relieve suffering. There are other and safer means always at command.

I shall not stop at this time to discuss the question as to how much of the anterior wall of the rectum is uncovered by peritonæum. There is an old rule for applying the trephine, that in every instance the operator should remember that some skulls are very much thinner than others, and he should act on the supposition that the particular point upon which he is operating is the thinnest part of the thinnest skull ever seen. Something of the same kind might be said of the peritonæum over the rectum; and everybody who has studied the anatomy of the part knows how various are the opinions of different authorities on this point. Nevertheless, a line of danger can be marked out, and that line is about three inches from the anus. It is true that more than this amount of the rectum has been removed without encountering the peritonæum, and it has been opened below this point; but I should not, for my own part, hesitate to try to remove three inches of the bowel for a cancer, and within a few weeks I have refused to attempt to extirpate in an otherwise suitable case, because the disease passed this line. The index finger is a good guide. What is well within its reach in a hand of good length, it is safe to try to remove, provided it does not involve surrounding tissues to an extent which renders its complete removal impossible. Whatever may be said of the impunity with which the peritonæum may be opened in other parts of the body does not seem to apply here; for I have been able to find but three cases in which that accident was not followed by a fatal result.

Regarding the question of radical cure, we find difficulty in establishing exact dates, and have to take into consideration the reputation of the reporter. We find, however, that in one hundred cases (deducting those immediately fatal, and seventeen which passed out of observation immediately after operation) we have six cases of reported permanent cure, in which there had been no return for at least ten years. Three of these are reported by Volkmann, two by Velpeau, and one by March, of Albany.

In one case the patient was alive and well eleven years after the first operation, though there had been two returns and subsequent removals (Volkmann). These are perhaps the only cases which it would be proper to consider as permanently cured, though others might be included in that category. But, for the sake of exactness, I give the subsequent histories of the cases wherever they are mentioned.

In one case the patient was alive and well six years after the operation; in two others, five; in four others, four; in three, three; and in five, two years or a little over. Nine are stated to have been alive and well, with no sign of return, at a year or a little over after the operation, and sixteen were reported in the same condition at times varying from two months to one year. In eight the return is stated to have occurred in distant parts—one in the liver, causing death eight years after the operation, and another seven years after. In the six other cases there was a return, either in the neighboring lymphatics or in the internal organs, at a time varying from one year to sixteen months. This gives a total of twenty-four cases, out of one hundred in which the result is known, in which life was prolonged from one to six years with no return of the disease; three which proved fatal after six years; and six in which there had been no return ten years after the operation. On the other hand, deducting two cases stated to have proved fatal by a return of the disease, but at a time not given, and seven cases of Labbé's in which the average time of return is said to have been ten months—in thirty-five cases where this fact is mentioned there was a local return in nine within three months, in nine within six months, in eleven within one year, in four within a year and a half, and in three within two years.

But, to arrive at a just conclusion as to the value of the operation, we must study these figures in a different light. It is claimed in favor of lumbar colotomy that the operation of excision, even when a good immediate result is obtained, may shorten life by hastening the return and final progress of the disease. Unfortunately, it is difficult to tell in any particular case how long a patient would have lived, had the disease been left to its course; but, accepting as a basis for comparison Allingham's estimate of the average duration of life in cancer of the rectum as two years or less, we are justified in concluding that in all cases where life was prolonged more than one year and a half after the time of operation (the operation generally being done late in the disease), this length of life may fairly be attributed to the surgical interference. We find, not counting the permanent cures above stated, twenty-two such cases.

This estimate is manifestly a small one, for a study of the cases makes it evident that many who did not live eighteen months after the operation yet gained a considerable length of comfortable existence; and there is nothing to prove that in any case the operation hastened the natural course of the disease. We can only guess in any given case what the duration of life would have been had the disease not been interfered with, and, in cases where the estimate has exceeded the reality, it still remains to be proved that the operation is to be held accountable. There is a marked absence of anything in the reported cases which would go to uphold this supposition. On the contrary, we find in almost every case that attention is called to the great improvement in general health, the loss of pain, and the increase in strength. Patients go away believing themselves radically cured, return to their employments, and are reported by the French surgeons as "*parfaitement guéries*," a few weeks after the operation.

And this leads me to call attention to another point—the operation of excision as a palliative measure. In cases properly chosen, where the disease is not so extensive as to render its removal one of the capital surgical operations, we know of nothing better, and this fact can not fail to be deeply impressed upon the reader of these cases. The statement that all suffering was relieved is almost invariable.

I have carefully searched the record of cases in which a return of the disease within six months of the time of operation is reported, to discover whether, here also, there was any marked relation between this result and the nature or extent of the disease at the time of operation; but it is especially at this point that the table fails us. A proper answer to this question involves not only a careful report of the extent of the disease, but a microscopic study of its character, and such data are given only in a relatively small proportion of cases. I believe, however, that the cases show a marked relation between the rapidity of the growth before operation and the speedy return after removal.

We can trace no connection between the time of the return and the extent of the disease removed when the removal has been complete; and the microscopic reports are too few for general conclusions to be drawn from them. I know of no writers, except Stimson and Holmer, who have made a careful study of the specimens excised, and have given the results; and, so far as the clinical reports of the German operators go, they would seem to give support to their practice of removing everything involved, no matter how extensive, in the hope that the local return may be long delayed.

One other point which has been held to weigh against this operation is the alleged incontinence of fæces sure to follow it. In studying these cases, it strikes one curiously to read in Gross's "Surgery" that this result is sure to follow excision of a portion of the rectum sooner or later. In forty-five cases in which the condition in this respect is noted, there is stated to have been complete control over the evacuations in seventeen, control except in case of diarrhœa in nine, a fair amount of control (enough to prevent accidents, provided the patient were able to attend to the call of nature as soon as it was felt) in ten, and complete incontinence in nine only.

Admitting the fact, how can it be accounted for? For my own part, I have studied this question till I find it much easier to prove that there should not be incontinence after destruction of the sphincters than to explain why there should be. I believe the sphincters play a very secondary rôle in the physiology of defecation, and yet a great degree of incontinence has been seen to follow their simple division in cases of fistula. The anatomical arrangement which was first described by Nélaton under the name of a "third sphincter," and which is supposed to take the place of the others, is not all a myth, neither is it what its name would indicate to one having in mind the muscular band closing the anus; and Houston's folds of mucous membrane, though sometimes heavy enough to obstruct the passage of fæces, can not be relied upon. In the reports of cases there are many in which it is stated that the patients were able to live comfortably by giving immediate attention to the desire to evacuate; and it is perhaps the *power to resist* a desire to evacuate the bowels, rather than a *constant resistance* to the passage of fæces which have accumulated in the rectum, which best expresses the function of the sphincters in defecation.

The periodically recurring descent of fæces into the rectum causes the desire to evacuate. In health, we are able to resist that desire, and after a certain time it may pass away and may not return till a corresponding hour of the succeeding day. Its passing away is probably due to the retreat of the fæces into the sigmoid flexure. When the sphincter is destroyed, we still have the warning of the descent of fæces, but the power of control or resistance after such descent is gone.

This is emphatically coming back to O'Beirne's "new views of the process of defecation"; but the views which he published in 1833 are essentially those which Foster publishes in 1880, and they are founded on the facts (?) that the rectum is normally empty, and that, except in cases of chronic constipation, where the rectum has become unnaturally distended, no fæces will be found pressing against the sphincter or below the sigmoid flexure.

The fæces, as they pass along the colon, are lodged for a time in the sacculi, and finally accumulate in the sigmoid flexure, where they are supported by the sacrum and perhaps also by the bladder. Defecation is the result of a voluntary effort at first, but yet is actually accomplished by a mechanism beyond the control of the will. The voluntary part of the act is shown in two ways: first by inhibiting the action of the lumbar nerve center which controls the sphincter, and thus relaxing its normal tonic contraction; and secondly, by the voluntary pressure on the colon by the abdominal muscles. But neither of these is sufficient to empty the sigmoid flexure, and they are therefore joined to a third involuntary element in the act—an increase in the peristaltic movements of the flexure itself. This, however, is not exactly the order of action. The sigmoid flexure becomes full, and the pressure of the fæces excites in it an increased peristaltic action, by which its contents are pressed onward into the previously empty rectum and come to press upon the sphincter. The sphincter is then relaxed by the voluntary inhibiting of its spinal nerve center, and the pressure of the abdominal muscles is brought to bear upon the descending colon; by which, and by the increased peristalsis, the sigmoid flexure and the rectum are entirely emptied.

Accepting these views of the physiology of defecation, it is not difficult to understand why there should not be complete incontinence after destruction of more or less of the lower end of the rectum and anus; and there are other facts, such as the presence of the valves, the crooked course of the rectum, and its normal contraction due to its heavy muscular layer, the consistence of the fæcal mass itself, and its tendency to lie quietly in its place till expelled by the activity of the involuntary muscular fiber of the gut, which tend to the same result. The question admits of much discussion, but the fact remains, that, as a palliative measure, lumbar colotomy has no advantages over excision on the ground of comfort and cleanliness.

From a study of the cases we are justified, then, in drawing the following conclusions:

1. The fatal results which have thus far been recorded as following this operation nearly all occurred in cases where from the extent of the disease such a result was not improbable.
2. When the disease reaches above three inches, or involves neighboring parts to such an extent as to render its entire removal without injury to the peritonæum questionable, the operation is contra-indicated.
3. Although there have been a few cases of cure, such a result is so rare as not to justify the exposure of the patient to the risk of immediate death which attends the attempt to remove extensive cancerous disease.
4. The operation is chiefly valuable as a palliative measure, and as such it is applicable to cases where the disease has not made extensive progress.
5. As a palliative measure in proper cases, it compares favorably with the results of lumbar colotomy, both in prolonging life and in relieving pain.
6. The operation is not followed by an annoying incontinence of fæces, except in a small proportion of cases.
7. The operation is not a substitute for lumbar colotomy in cases where the disease has reached more than three inches from the anus.
8. There is no proof that the operative interference shortens life by hastening the progress of the disease.

BIBLIOGRAPHY.

Agnew.—"Phil. Med. Times," June 28, 1877.

Allingham.—"Diseases of the Rectum," 3d ed., London, 1879.

Briddon.—"Med. Record," Jan. 6, 1877.

Bushe.—"Treatise on Diseases of the Rectum," New York, 1837, p. 294.

Byrne.—"Annals of the Anat. and Surg. Soc.," May, 1880.

Baumès.—"Bull. de l'Acad. Roy. de Méd.," t. x, p. 986.

Chassaignac.—"Traité de l'écrasement linéaire," Paris, 1856.

Cripps.—"Cancer of the Rectum."

Crosse (quoted by Mayo).—"Observations on Diseases and Injuries of the Rectum," London, 1833, p. 210.

Curling.—"Observations on Diseases of the Rectum," London, 1851. "Med. Times and Gaz.," March 14, 1857.

Dennonvilliers.—"Gaz. des Hôp.," 1844.

Desgranges (quoted by Mollière).—"Maladies du Rectum," etc., Paris, 1877, p. 627.

Dieffenbach.—"Die operative Chirurgie," Leipzig, 1845.

Dolbeau.—"Thèse de Fumouze."

Duplay.—"Gaz. Méd. de Paris," 1872, p. 486.

Dupuy.—"Bull. de la Soc. Anat.," Paris, 1872. 2^{me} s., xvii, p. 242.

Emmet.—"Principles and Practice of Gynæcology," 1st ed., Philadelphia, 1879, p. 511.

Ewart.—"Lancet," June 21, 1879.

Fenwick.—"Montreal Gen. Hosp. Reports," vol. i.

Gay.—"Lancet," June 28, 1879.

Gosselin.—"Gaz. des Hôp.," 1879, p. 921.

Holmer.—"Hospitals-Tidende," March 31, April 7, 14, 1880.

Holmes.—"Trans. of the Clin. Soc. of London," 1878, p. 113.

Holt (quoted by Curling), *op. cit.*

Keyes.—"Arch. of Med.," Aug., 1879.

King.—"Brit. Med. Jour.," June 21, 1879.

Kumar.—"Wiener med. Woch.," 1878, p. 1070.

Labbé.—"Gaz. des Hôp.," June 4, 18, 1880.

Levis.—"Arch. of Clin. Surg.," Feb., 1877.

Lisfranc.—Thèse de Pinault, 1829.

Maisonneuve.—"Union Med.," 1860. Also Thèse de Cortes, 1860.

Mandt.—"Revue Méd.," 1836, p. 264.

March.—"Trans. of the N. Y. State Med. Soc.," 1868; also "Med. and Surg. Reporter," June 9, 1877.

Mayo.—"Observations on Diseases and Injuries of the Rectum," London, 1833, p. 212.

Moore.—"Med. Times and Gaz.," March, 1857.

Mollière.—Thèse de Carcopino, 1879.

Nüssbaum.—"Aertzlich. Intelligenzblatt," 1863.

O'Hara.—"Phila. Med. Times," vol. viii.
Paget (quoted by Cripps), *op. cit.*
Peters.—"Arch. of Med.," Aug., 1879.
Pital du Cateau.—"L'Expérience," t. vi, p. 27.
Polaillon.—"Gaz. des Hôp.," 1879.
Post.—"Med. Record," July 31, 1880.
Récamier.—Thèse de Massé, 1842.
Roddick.—"Montreal Gen. Hosp. Reports," vol. i.
Schuh.—"Abhandlung der Chir. und Operationslehre," Wien, 1867.
Siebold (quoted by Curling), *op. cit.*
Simon.—"Lancet," 1851, ii, 82.
Simon, of Rostock.—"Deutsche Klinik," 1866.
Stimson.—"Arch. of Med.," Aug., 1879.
Terrillon.—Thèse de Carcopino, 1879.
Van Buren.—"Arch. of Med.," Aug., 1879.
Van Derveer.—"Med. Record," Sept. 20, 1879.
Velpeau.—"Nouveaux Élémens de Méd. Opératoire," Paris, 1839, vol. iv, p. 814.
Verneuil (quoted by Marchand).—"Étude sur l'Extirpation de l'Extrémité Inférieure du Rectum."
Volkmann.—"Klin. Vorträge," March 18, 1880.

VISUAL PURPLE.

By W. C. AYRES, M. D.

In 1876, the late Professor Boll, of Rome, discovered that there existed in the retina of the frog a substance which was sensitive to light, and gave it the name of visual purple. Since that time, his observations in regard to the frog have been extended to a variety of animals, and, among them, to man; and bidden fair to revolutionize all our knowledge of the physiology of nervous actions. It soon became known, however, that the seat of this photo-chemical substance was always in the rods, and never in the cones; and, since the cones are the elements which occupy the region of distinct vision, the *fovea centralis*, and since the purple is never found in that locality, distinct vision, both for objects and for colors, must be independent of its existence. It is, nevertheless, always present in the retina under suitable circumstances, and, this being the case, it must have some definite physiological office to fill, and of course the question then becomes, What can be its nature and the purpose it serves?

In the first place, we know a great deal concerning its nature: for instance, if an animal be placed in the dark, and its retina be afterward examined, each rod will be found to be full of the visual purple. (The retina must be prepared for inspection under the non-actinic sodium flame.) If such a retina be then brought into daylight, the purple is rapidly bleached, but the phases it passes through in this bleaching are peculiarly significant. At first it becomes less purple, then chamois, and afterward yellow in color, but finally it is reduced to white. W. Kühne, of Heidelberg, has studied these changes in their utmost detail, and has given the yellow the name of *visual yellow* and the white that of *visual white.* (See "Archives of the Physiological Institute in Heidelberg".)

I would remark incidentally that, in man and the higher animals, the purple is the only colored pigment in the retina, but that we find in birds, etc., a peculiar colored fat globule, first described by Hanover; and where these globules and the visual purple exist simultaneously their quantity is always in an inverse ratio, that is, the more chlorophane, xanthaphane, and phodophane, the less the quantity of visual purple. (See "Stable Colors of the Retina," by W. C. Ayres and W. Kühne, "Archives of the Physiological Laboratory in Heidelberg.")

In all the above-mentioned animals the visual purple is still sensitive to light, and consequently will go through the process of bleaching, but, when we pass down the scale, we soon come to a class where this compound is no longer sensitive to light, but must exert its influence as a stable pigment. ("Ueber die Stabschenfarbe der Cephalopodon," by C. Fr. W. Krukenberg, "Arch. d. physiolog. Inst. in Heidelberg.")

One more step brings us to an eye in which the visual purple is not sensitive; but it is also entirely exterior to the retina, having its seat in the pigment epithelium. This I have found to be the case in a fish known as the blackfish, where it is seen in the shape of long purple crystals, which, when isolated, have a peculiar amœboid motion in themselves. However, in all those animals that perform their effective locomotion in heterogeneous light, the purple is sensitive, and, as we have before noticed, goes through a peculiar bleaching process; and it is to this that I wish to call special attention.

In Vol. I, Part 4, of the "Archives" already referred to, Kühne has given us the *absorption spectra* of the visual purple and the visual yellow. In the case of the purple, the absorption begins at the line C in the solar spectrum, or near the heat end, and attains its maximum midway between D and E. From E it decreases gradually to G, when the absorption curve falls rapidly through one degree of the solar scale, allowing all the indigo and purple light to pass through. In other words, the most actinic light is perfectly transmitted. The spectrum of the visual yellow is radically different from this, and its absorption is much more intense, although its color is not nearly so deep. In this spectrum all the rays up to F pass through unchanged, but at this point the curve mounts very rapidly, and the absorption is complete out to the ultraviolet light; i. e., all the actinic waves are destroyed.

The generally accepted opinion of the present day is, that the action by which the terminations of the retinal elements receive their impressions is a photo-chemical one, and, if this be true, the above-described relation of the different absorptions of the visual purple and yellow can not be over-estimated. We shall find in it at least one direct office for this most important compound to fulfill.

One word more as to the nature of the purple. It is an albuminoid secretion from the black pigment epithelium of the retina. (See "Archiv. d. physiolog. Inst. in Heidelberg." W. C. Ayres and W. Kühne.) When light has acted on the purple while the eye is in the orbit of a living animal, having its normal supply of blood, the bleaching of the purple to yellow is easy and comparatively rapid, whereas a further action, resulting in the reduction of the yellow to white, is difficult and slow. Also, as is natural to suppose, the restitution of the yellow to its primitive purple condition requires but little time or expenditure of energy on the part of the retina, but the change of white to yellow is very tardy.

Now, suppose that an eye has been in a bright light for some time, and it is brought suddenly into a dark room—the common experience is, it does not see; but, after having remained for some time in a room not quite dark, we begin to distinguish objects which before were indiscernible. What must necessarily have been the condition of the retina during this change? When the eye was in the light, a great portion of the purple had been reduced to yellow, and the yellow was absorbing almost the whole of what is known as the chemical portion of the solar spectrum, so that but little actinic light reached the cones; and the retina was working under the modified condition of great absorption of photo-chemical rays. When the eye was placed suddenly in the dark, there must have been so much visual yellow that it absorbed nearly or quite all the light that passed into the eye, and therefore vision was impossible.

Now, the known condition is, that under such circumstances the yellow is rapidly transformed into purple, and the constitution of the purple lets all the chemical rays be transmitted. We then notice that we begin to see a little at first, and then more and more; and the time which we require to "get accustomed" to the dark is remarkably coincident with that which is required for the transformation of the visual yellow into visual purple. We have found, by actual examination of the retinæ of animals, that when the eye is accustomed to the dark it is rich in the purple pigment, and the yellow is entirely absent. Of course a reversed relation is gone through with when an eye is changed from the dark back into the light; it does not see, and the condition of the retina will fully explain the cause of its incapacity. Having been in the dark, the purple is in excess, and all the chemical rays are being transmitted; the eye, being brought suddenly into bright light, the same will go on, and the effect is, that the eye will be overpowered and "dazzled." A rapid reduction of the purple to the yellow commences immediately, and just as the yellow is formed the excess of light will be absorbed and the retina will begin to appreciate objects which it could not before. The time agrees in this transformation also.

If we wish to draw any conclusion from these facts, we are most certainly justified in saying that at least one office of the visual purple is to enable the eye to accustom itself to any circumstance, and by a continual self-adjustment to keep itself fitted to work to the true advantage under all conditions. The visual purple, when sensitive to light, would then be a conservative compound, so constituted as to allow *a more delicate photo-chemical substance in the cones* to produce excitations of the terminal retinal elements; or, if we hold the theory that the sensitive action of the retina in the perception of light results from the direct vibrations of the light waves, the action of the purple would, nevertheless, be the same, i. e., to keep the cones continually in the proper condition to operate to the best advantage.

All eyes in which the purple is a stable pigment are imperfect, and so far they have been found only in fishes. The result would be the same whether the pigment were situated in the rods or in the epithelium, since, in both cases, each cone would be surrounded on all sides by a corona of pigment, and its absorption would accomplish the same protection. These eyes are never placed in a varying light, since they are all found in deep-sea fishes, that consequently are subjected to quite modified circumstances of life. The cornea of these fishes is of itself pigmented yellow, and the fact that the curvatures of the inner and outer corneal surfaces are not concentric would produce a high degree of astigmatism, and any such delicate arrangement as a sensitive purple would be superfluous, and consequently dispensed with by Nature.

A CASE OF ABSCESS OF THE ABDOMINAL WALL, IN A PATIENT WITH SUBCLAVIAN ANEURISM.

By T. R. CHAMBERS, M. D.

This is the history of two attacks of abdominal trouble occurring in a man fifty-two years of age, suffering with aneurism of the left subclavian artery, of two years' duration. During the past six months he has used morphine in constantly increasing doses, until latterly he has been compelled to take as much as thirty-five centigrammes [about five grains] daily.

First Attack.—*April 23d*, 8 A. M.—A. J. W., having passed the night in great agony, had a severe chill lasting half an hour. At the same time he complained of great pain on motion in the right iliac fossa, confined to a region of about the size of the palm of the hand. He could not lean backward or forward in, nor rise from, his chair, because of extreme abdominal tenderness. At times he had a desire to cough, but was afraid to yield to it ; there was no pain in the chest. The general disturbance was very great; by noon he was much prostrated; at 7 P. M. his temperature was 102° F., his respiration 56, and his pulse 134, bounding and compressible, having not at all the feeling of a serous-inflammation pulse. At 11 P. M. he dozed in his chair from a powerful dose of morphine, the pulse being 100, the respiration 34, and the temperature still at 102°. *24th.*—Seen in consultation by Dr. Weir, Dr. G. L. Knapp, and Dr. Wilson. The movements of his bowels were not as free as they should be, though he had taken salts when they had seemed to be needed. A thorough examination of the abdomen was precluded by the exquisite agony which even simple palpation caused. Friction râles were found in the axillary line, just over the liver. Pulse 100; respiration 34; temperature 100·7° F. It was concluded that there was probably fecal obstruction in the intestine; large enemata were ordered, with counter-irritation over the seat of the pleurisy. *25th.*—More comfortable, but still depressed in spirits. The abdominal pain continued to exceed that of the aneurismal shoulder. *26th.*—Patient in tears with the sharp cutting pain in the abdomen. There is a tense, tympanitic, highly sensitive tumor, of the size of the open hand, lying partly in the iliac, lumbar, and umbilical zones, across the abdomen. He has had three enemata, resulting in considerable escape of gas (and with some relief thereby), but no fæces have passed since the 22d; 10 P. M. A very large enema given. *27th* (fourth day).—A large evacuation of fæces occurred, with escape of gas. From the description furnished, there was no pus, as of an abscess discharging. A diarrhœa lasting for four days and a sore feeling in the abdomen for about a week were all that remained of the trouble, and he was quite as comfortable as his aneurism allowed, sleeping in bed, and taking a short walk daily. He had cut down the morphine to a minimum dose.

Second Attack.—*May 30th.*—Patient had been melancholic for a week, and suffering from obstinate constipation, and to-day examination revealed a tense, painful abdominal tumor, ridged, as if marking out the transverse colon. A large enema of turpentine, oil, and suds was ordered; in addition, external manipulation, combined with change of posture of the body. These measures were repeated on the morning of the 31st in vain, but at 7 A. M. the patient had a chill lasting twenty minutes, accompanied and followed by a rise of temperature; the respiration rose to 75 a minute, and there was considerable dyspnœa. At 7 P. M., he was more comfortable. Examination then revealed diminished respiratory effort on the right side, with bronchial breathing and dullness posteriorly on the same side, over a region a hand-breadth in extent above and below the angle of the scapula. *June 1st.*—Scarcely any pneumonic symptoms remain, and there is only a slight cough, with scanty sputa, which float in water and do not differ from what he has had for months. These peculiar symptoms of pulmonary disease have continued to the present day, with slight variation. They are thought to be due to bronchial dilatation, the primary cause of which is a matter of question—possibly the subclavian or an aortic aneurism; but that does not concern this paper, and is mentioned only to show one of the difficulties in the way of a correct diagnosis in the case. The bowels have moved slightly, but there is still great distention, with pain in the right iliac and lumbar regions. *6th.*—The abdominal tenderness is increased, and the agony is so intense that the patient expresses a wish for death. A small aspirating needle is introduced just above and to the inner side of the superior spine of the ilium, and a few drops are obtained of a thick fecal and purulent fluid, of a very foul, penetrating odor. There is passed at stool daily a small quantity of a material which closely resembles it in color and odor. Pulse 84, hard and full; temperature 100°. He complains of feeling cold every evening at about eight o'clock. *7th.*—The aspirating needle is used again, and about four grammes [a fluidrachm] of the same foul-smelling purulent fluid are drawn off, when the needle refuses to act further, on account of repeated plugging, though reintroduced several times. Temperature 99°, pulse 88, respiration 30. Ordered a large enema, also castor-oil by the mouth, which makes the patient very sick for six hours, but produces no other result. *9th.*—The abdominal swelling is harder and more exquisitely sensitive to the touch. Introduced a soft-rubber tube into the bowel for a distance of nearly a metre [about forty inches], and injected through it about three litres [about seven pints] of fluid (oil and water). The tip of the tube seemed to enter a feculent mass, and brought away a specimen of the same. The next day a few masses came away, but the tumor was scarcely diminished in size or in sensitiveness, and seemed to contain hard lumps; the integument over it was infiltrated and pitted on pressure. There was no fluctuation. *13th.*—Again injected oil and water into the bowel through a flexible tube a metre in length, introduced to its full extent, with the result of producing only a small stool, but no change in the tumor. *14th.*—An erysipelatous blush has appeared upon the tumor, without any concomitant febrile excitement, like the reddening of skin over an abscess; no fluctuation. *20th.*—The reddening has sluggishly increased, and the tumor is very tense. An iodoform ointment is applied, with great relief, over the seat of superficial pain.

Three weeks from the commencement of the trouble, June 21st, the patient was brought to see the necessity for using the knife, which he had steadily refused to allow for several days. Fluctuation was very difficult to make out. An incision about three centimetres [an inch and two tenths] long was made through the skin and adipose tissue, at the site of the previous aspiration, and half a litre [about a pint] of very foul-smelling pus, with considerable blood, was freed. The tumor entirely disappeared, and the patient experienced immediate relief. A silver probe could be introduced in all directions except inwardly; the parts were so extremely sensitive, however, that a knowledge of the full extent of the cavity was not obtained, but it seemed to be in and of the abdominal wall. The subsequent treatment consisted in washing out with carbolized water; passing a fenestrated drainage-tube into the cavity through the opening made by the incision and out through a counter-opening; and there was injected through this, at first, carbolized water, and afterward balsam of Peru; finally, the sinus left healed kindly under the use of tents and pressure. From the time the pus was evacuated there was not a single bad symptom; the bowels began to move, and have acted regularly ever since without the aid of purgatives. The patient refuses to take morphine, though at times the pain due to the anenrism is very severe.

September 10th.—Since the last note the patient has been in comparative comfort, and is in a generally improved condition; his appetite is fair, his bowels are regular, he sleeps without the aid of medicine, and walks out in the fresh air every fair day. For the past week, a peculiar swelling of the abdomen, in the upper umbilical region, has presented—the skin is arched over an oblong ovoid, of about the size of an ostrich's egg, extending across the median line just above the umbilicus. The umbilicus itself is pulled over to the left to the distance of five centimetres [about two inches]. The swelling is tense, but may be reduced by deep pressure; the skin over it is normal in color, but glistens, and on percussion it is dull above and flat inferiorly. The left side of the abdomen sinks in as much as the other part bulges. There is no pain whatever. He wears an abdominal bandage, with a pad, which keeps the swelling reduced.

To recapitulate: a man whose life is necessarily sedentary has an attack of abdominal pain and constipation, with the formation of a tumor, lasting four days, relieved, after a number of vain trials, by a large enema. About a month after, he has almost the same symptoms, only they last longer and become very much more serious, resulting in abscess requiring an operation. The first attack, it was expected, would kill him by exhaustion.

First: the question arises as to the character of the first attack. Was it due to a simple obstruction of the bowel from impacted fæces or from some other cause, or was it, what seems more probable, a perityphlitic inflammation resolving without suppuration?

Secondly: what relation had the abscess which was opened to the inflammation of a month before—was it simply "*post*," or was it "*propter hoc*"? With regard to the constipation of the second attack, which proved so rebellious, it is noted that, immediately on emptying the abdominal tumor, the bowels regained their normal activity, and it therefore seems probable that there was no communication between the interior of the bowel and the cavity of the abscess, but that the fecal odor of the pus drawn through the needle simply illustrated the well-known fact that abscesses in the neighborhood of the intestines smell of fecal gases.

Thirdly: with regard to the peculiar-shaped abdomen after three months, why is the umbilicus pulled over to the left side? what is the tumor in the median line—is it a distended colon, or does it denote a refilling of a portion of the old cavity in the abdominal wall?

NOTE (November 17th).—Since this was written, the epigastric swelling has developed definite outlines, and is evidently formed by the distended transverse colon presenting through the separated fibers of the rectus muscle. The muscle of the right side being weakened, accounts for the umbilicus being drawn over to the left.

◆

Editorials.

THE BROOKLYN DEBATE ON PUERPERAL CONVULSIONS.

AT the October meeting of the Medical Society of the County of Kings, Dr. Avery Segur's paper on the prophylaxis of puerperal convulsions, that had been read at a previous meeting, came up for discussion. The debate was more noteworthy than any that has taken place, so far as we know, at our local societies since the discussion on the pathology of pulmonary phthisis, at the Academy of Medicine, some ten years ago. Much of what was said was highly creditable to the speakers, and really ought to count for something in the advance that it is to be hoped is going on in our knowledge of the terrible disease in question. It is not our present purpose to analyze the statements and views put forth by the various gentlemen who took part in the debate, but we shall endeavor to give an idea of some of them in our next Quarterly Report on Obstetrics and Gynæcology. In the mean time we can not forbear to call attention to the very forcible and valuable character of the remarks made by Dr. W. H. Martin and Dr. A. Hutchins; and, while we would urge every practitioner, to whom the official publication of the society ("The Proceedings of the Medical Society of the County of Kings") is accessible, to read, not only Dr. Segur's paper, but the debate in full, the contributions of Dr. Martin and Dr. Hutchins seem to us specially worthy of close study.

Our particular object in alluding to the matter is, to point out what seems to us a lesson that is to be drawn from it as to the proper manner of conducting society work of this sort. The greater portion of the remarks made—certainly the most valuable of them—were offered in the form of written communications, the writers having evidently taken pains to arrange their facts systematically, and to pay due regard to pertinence and continuity in the expression of their views. "The meeting was then thrown open to a general discussion"; and at this point the debate dropped to the commonplace level that we have almost come to look upon as inevitable at society meetings. The plain inference is, that extemporaneous "general discussion" is not edifying. In our opinion, a paper of any importance should not be discussed at the meeting at which it is read, but the debate should be made the special order for the next meeting. In the mean time the paper, or an abstract of it, should be printed and put into the hands of every member who is to take part in the discussion, in order that he may prepare his remarks with a full knowledge as to the precise points that are under consideration. We do not think it necessary that every contribution should be in writing, for there are those who have a facility in speaking, and who have their thoughts always well arranged, and they are the ones who are most apt to bring out something worth listening to.

THE INDEX-CATALOGUE.

The first volume of the "Index-Catalogue of the Library of the Surgeon-General's Office, United States Army"—the first installment of the monumental work that every member of our craft at all given to literary work, or to thorough study, has been longing for ever since the "Specimen Fasciculus" appeared, four years ago—is now fairly before the profession. The Government has done a noble act in authorizing its publication, and a wise act in providing (as we understand has been done) that any one may become possessed of it, for a remarkably small sum, by addressing the Public Printer. To many of us, it did not need the "Specimen Fasciculus" to apprise us of what sort of work Dr. Billings would produce. What he had done before, and the activity, zeal, and intelligence that he has constantly shown, were ample guarantees that the catalogue would be of a character to make us all still prouder of, and still more thankful for, the scientific and literary work that has come forth from the Surgeon-General's office during the past fifteen years.

It would be absurd to enter upon a review of this volume, in the sense of a review of any ordinary book—we could but praise every feature; neither is it in any way incumbent upon us to describe its plan to our readers, for it explains itself in a most admirable manner. Although Dr. Billings modestly deprecates the idea that it is a complete bibliography, it is nevertheless so extensive that it ought to go far toward enabling one to refer to all that is of value in the literature of medicine. We venture to hope, too, that it may prove the means of convincing the victims of the *cacoethes scribendi* that what they purpose giving us has already, in many instances, been better said.

We trust that nothing will interfere with the continuous preparation and publication of the remainder of the work, and that the little return which it may be within the power of individual physicians to make for this great labor (by giving to the library rare works which it does not already include, and by aiding it to complete its sets of periodicals) will be rendered without stint.

ENLARGEMENT OF THE "JOURNAL."

ALMOST every month we have been obliged, for lack of space, to postpone the insertion of matter which we desired to lay before our readers. We have had to omit from this number, for instance, many book notices that ought to have appeared in it, as well as a considerable amount of other material. In several instances we have had to leave out altogether articles that nothing but lack of space prevented us from giving. To remedy this state of things, the "JOURNAL" will be enlarged, beginning with the January number, by adding both to the width and to the length of the page, without, however, any increase in the size of the paper. Future volumes, therefore, will be of the same size as at present, and they will not be so bulky or unwieldy as if the number of pages were to be increased. It is estimated that this change will be equivalent to the addition of about twelve pages to each number of the "JOURNAL." Much of the matter that is printed in small type will be arranged in double-columned pages, in order that it may be read more easily.

◆

Reviews and Literary Notes.

A Treatise on Comparative Embryology. By FRANCIS M. BALFOUR, M. A., F. R. S., Fellow and Lecturer of Trinity College, Cambridge. In two volumes. Vol. I. London: Macmillan & Co., 1880. Pp. xi–492–xxii.

IT is perhaps not usually appreciated that there has arisen in England a new school of naturalists, of whom Professor Huxley is the leader, and among whom many of the ablest of the younger generation of English men of science are to be numbered. The leading principle of this school is that life should be studied in all its forms and from every point of view. Accordingly, they aim to be, first, biologists, but neither botanists nor zoölogists; and, second, specialists in some department of morphology or physiology. There can be no question of the propriety of this view, or that it has already advanced the quality of the scientific work among English naturalists, increasing both the breadth and the accuracy of their investigations.

This school has already achieved a great deal, not only in original research, but also in reforming the methods of teaching, both in the schools and at the universities, in Great Britain and in the colonies. Professor Huxley's science classes at South Kensington, and his examinations at London University, together with the eager propagandism of Dr. Michael Foster, Professor Lankester, Professor Martin, Mr. Balfour, and many others, have resulted in a rapid improvement in biological science. This progress is signalized in many ways, of course chiefly by the character of the more recent researches, but conspicuously also by the new text-books it has called forth.

Fifteen years ago there was hardly a decent text-book in English (if we except a few translations) of any department of biology; the good manuals were nearly all in German. This deficiency was a very serious impediment to young students, and interfered greatly with their training. There was no comparative anatomy, embryology, histology, zoölogy, or physiological botany, that could justly be termed thorough and scientific. Even the human physiologies were inferior to the German manuals. Now all this is changed, and England has produced some of the best handbooks of the biological sciences in any language; America has yet to contribute her share. We need mention only Huxley's and Foster's books. To these we may now add another, Balfour's "Comparative Embryology," which ranks worthily with its predecessors.

Mr. Balfour, who is a Fellow and lecturer of Trinity College, has charge of the morphological laboratory of the University of Cambridge. He has published a number of valuable articles upon the embryology of vertebrates, especially a series of elaborate investigations upon the development of elasmobranchs. The merit of his original work secured to him, at an unusually early age, an election as Fellow of the Royal Society of London, an honor which he had certainly earned. Several pupils of the Cambridge laboratory have also produced important memoirs, strongly impressed with the character of Mr. Balfour's guidance. There was, therefore, ample evidence of our author's mastery of his science, and, when we read the announcement of his forthcoming manual, we felt assured of its thoroughness. We confess, however, that the examination of the first volume (the second is yet to appear) was a pleasant surprise to us, for we had not anticipated such a happy presentation of the subject, believing that the material was far too fragmentary to be compiled into a form even partially satisfactory. Mr. Balfour has proved the contrary.

The volume before us deals, first, with the development of the egg and with spermatozoa, the phenomena of impregnation and of segmentation; secondly, with the special embryology of all the classes of invertebrates, except the tunicata, which are to be treated of in the second volume, with the vertebrates.

The treatment throughout is remarkably clear and concise, and, above all, systematic. We constantly encounter such phrases as: "The results arrived at in the present section may be shortly restated in the following way, (1) . . . ., (2) . . . .," etc. (p. 99), or: "Van Beneden has shown that (1) . . . ., (2) . . . .," etc. Thus every point made is plainly brought forward. Moreover, the selection of what to insert and what to omit has been on the whole very judicious. This was really the most difficult part of Mr. Balfour's task, for embryological writings are of very unequal value, and to test their accuracy throughout by new observations would have involved many years' labor, and occasioned a delay much to be regretted. It is more important to have a good work at once than a little better one some years later; the improvements can be introduced into a new edition.

We think it unfortunate that the author has taken pains only with the selection, not with the execution, of his illustrations, which comprise a series of 275 woodcuts. Some of them are reproductions of familiar figures from the pages of Gegenbauer, Huxley, Agassiz, and others, but a large proportion are new, being engraved on wood after various authors. These are only approximate copies of the originals, with which we have compared a number of them, for instance, Figs. 63, 66, 107, 141, 241, etc. As engravings, these new cuts can not be praised; they are of the coarsest description, and would undoubtedly have been declined by a German, French, or American publisher. There is scarcely a figure in the book which would give a person not familiar with embryos even an approximate idea of their natural delicate and transparent appearance.

To each chapter is appended a list of the principal publications relating to the subject of which it treats. These lists are also reprinted in an appendix, in which they are numbered consecutively up to 572. This bibliography is excellent, and really contains a sufficiently complete catalogue of the leading essays. There are a few omissions—surely Spengel's memoir on the uro-genital system of the amphibia and Fürbinger's on the same subject should be given among the authorities on the development of the vertebrate ovum. The list of F. E. Schulze's papers on the sponges is incomplete. Faxon's paper on the development of the pinnixa is also omitted, although it is important on account of the suppression of the megalops stage in this decapod, a unique exception. The growth of embryological literature is so rapid, that, since the publication of Balfour's volume, several memoirs of great worth have already appeared.

The treatment of the special subjects is sufficiently full both to guide the student and to aid the investigator. One is struck in looking over the chapters to see how largely they are taken up with abstracts of special papers, and that all we know of the development of nearly every group of invertebrates is the special embryology of a few species. The fragmentary condition of our knowledge renders it impossible in most cases to give any general accounts of the greater number of groups. The compilation of the results already obtained will be found, we think, on the whole, more valuable to the investigator than to the student, and will serve principally to indicate in what directions research may be turned to most advantage. We are inclined to consider the cœlenterata and the insecta as those classes which promise most to the investigator of their embryology. Our knowledge of both groups is particularly unsatisfactory. About insects singularly little has been written—out of 572 titles quoted by Balfour, only 51 refer to insects, including the spiders, the mites, the centipedes, and the peripatus! Yet there are more species of insects than of all other invertebrata together. Upon cœlenterates a good deal has been written, but for the most part without regard to the nicer modern methods of investigation or to the history of the germ layers, while some authors make positive statements which we must absolutely decline to accept, they are so improbable. Such are Kleinenberg's history of the germ layers in the hydra, and Allmann's affirmation that in the myriothela the segmentation-spheres fuse into a plasmodium. We think that in exposing these weak points so conspicuously Mr. Balfour has opened the way for immediate and rapid progress.

To the medical profession, Chapter II, which describes the maturation and impregnation of the ovum, will generally be found the most novel and interesting. The literature on this subject has within a few years suddenly become too bulky to be readily mastered. The formation of the polar globules, the entrance of the spermatozoon into the ovum, and the first divisions of the yolk are accompanied by many remarkable changes, which were entirely overlooked until within a few years, yet are unquestionably of fundamental importance, and may lead ere long to a comprehension of the nature of sexual phenomena.

The chapters dealing with special embryology are brought fully up to date, and include the most recent observations. The dicyemidæ and the orthonectidæ are taken up first; then follow the sponges, the cœlenterata, the platyelminths, and so on, in a rather queer order. It seems to us that Mr. Balfour has not always made quite so much of his material as possible, in that he has throughout preferred giving abstracts of the best researches, although in some cases, for example, that of the sponges and that of the mollusks, it would have been feasible to draw up more generalized accounts. However, the plan actually adopted is perhaps the wisest, on the whole, since it frees the compiler from the risk of errors; those which do occur must be traced directly to the original memoir.

The author has inserted a good deal of admirable criticism and some original matter. We would refer especially to his views concerning the homologies of the ciliated bands of polyzoa larvæ (pp. 253–255). He is, we believe, also the first to formulate clearly the differences between the crustacea and the insects in their development (pp. 451, 452), and he draws the very unexpected conclusion that the arthropods have a double phylum, the crustacea being descended from a phyllopod-like, the tracheata from a peripatus-like, ancestor. "This is borne out by the anatomy of the two groups; without attempting to prove this in detail, it may be pointed out that the crustacean appendages are typically biramous, while those of the tracheata never are at any stage of development biramous. . . . The similarity of many organs is to be explained by both groups being descendants of annelidan ancestors." We are glad to see also that Mr. Balfour inclines to accept the view arrived at by Moseley from his investigations upon the peripatus, that the tracheæ of insects are modifications of cutaneous glands.

We are surprised to find the echinodermata treated of at the end of the work, entirely separated from their nearest allies, the hydrozoa, the actinozoa, and the ctenophoræ. This separation of the radiates into two *disconnected* divisions is a singular freak, and it is difficult to discover any justification of the disunion. It is impossible to homologize the echinoderm larvæ, in spite of their bilateral structure, with true bilateral larvæ, because the bilateral larvæ are probably modifications of a polyzoa-like form, that is: a larva with a *præ*-oral ciliated band and having mid-, fore-, and hind-gut; while the echinoderm embryo has a *retro*-oral band and no hind-gut.

Mr. Balfour introduces many new Greek compounds for things already well named. This is done a great deal in England, but it seems to us pedantic and unnecessary, even when not confusing. Why not adopt the German terms, since every embryologist *must* know them in any case? We fail to see the advantage of proctodæum, epiblast, metagenesis, nephridia, and telolecithal over their long-established equivalents.

In conclusion, we regard Mr. Balfour's work as of great value and merit, on account of its thoroughness, its conciseness, and its remarkably skillful presentation of our present knowledge of the young science of comparative embryology. It must greatly stimulate and facilitate further research, being not only the first comprehensive treatise on the subject, but also of high intrinsic excellence. We congratulate Mr. Balfour upon the manual he has produced, and are much indebted to him. We await the second volume with great interest, for it will appeal more directly to the medical profession.

A Treatise on Common Forms of Functional Nervous Diseases. By L. Putzel, M. D., Physician to the Clinic for Nervous Diseases, Bellevue Hospital Out-door Department, etc. New York: William Wood & Co., 1880. Pp. vi–256. [Wood's Library of Standard Medical Authors.]

We have heretofore labored under the impression that before one could fairly be called a "standard author," he must have produced at least one original work of recognized importance. Now, to the best of our knowledge, Dr. Putzel has done nothing of the sort; and the publishers, in putting this book before their subscribers as that of a standard author, really place Dr. Putzel in an embarrassing position—one that, doubtless, he would not for a moment think of claiming for himself. From their announcements we judge that several more "standard authors" are to be created off-hand.

Having thus protested against what we look upon as a gross impropriety, we take pleasure in adding that we esteem all these gentlemen as most capable writers and teachers, and no doubt their works will receive from the profession just that appreciation which they intrinsically deserve, in spite of the misnomer under which they appear. Certainly, in this instance, Dr. Putzel has given us a book of such excellence that we heartily approve of its meeting with the wide circulation that its place in this series will probably procure for it. It consists of a series of very fair papers on chorea, epilepsy, neuralgia, and peripheral paralysis. To the first of these he has given forty-one pages, and this article, while it contains nothing that is new, is very exhaustive.

Forty-six pages are devoted to epilepsy, and some very interesting facts are given in connection with the symptomatology. Our author has likewise made the chapter on diagnosis very interesting,. yet we can not see why so much space should be given to so hackneyed a theme as epilepsy, when the therapeutics is so unsatisfactory. The general practitioner wants some facts in the treatment of this disease, and to him who has an obstinate case or two (and how many have not?) such expressions as "Bromide of potassium is by far the most potent of all remedies," "Belladonna was highly praised by Trousseau," "Strychnia has been very little used in epilepsy, but I have sometimes obtained excellent results," etc., "Oxide of zinc appears to be gaining more favor recently than it formally enjoyed," etc.—such general statements are very unsatisfactory, and even annoying. The remarks on the general treatment are very good, and we heartily commend the author's independence when speaking of the marriage of epileptics: "In the event that our advice in this respect is disregarded, as it so frequently is, it becomes a grave question whether it is not our duty to override the letter of the code, and inform the other partner in the projected marriage of the actual state of affairs."

On neuralgia we have seventy pages, and this subject is always interesting. This article will well repay one for a careful study. The results of treatment in neuralgia are at times very brilliant, and Dr. Putzel seems to have learned, in great measure, the secret of success. This secret he has faithfully imparted. He uses drugs and other therapeutical agents until *physiological effects* are produced.

The remaining eighty-six pages are upon peripheral paralysis, and the paper is well filled with cases, not only from the author's large experience, but from the works of Weir Mitchell and Rosenthal. Throughout the entire book, in fact, cases are given in detail, and the value of the treatise is thus greatly enhanced.

Why some of the other "common forms" of functional nervous disease are omitted, such as muscular spasm, hysteria, and the like, we are at a loss to understand, although in the preface the following reason is given: "The consideration of hysteria has been omitted because this disease has been described in sufficient detail in numerous works which are now in the hands of the medical public."

It is to be hoped that in future editions our author will see, as we do, the fallacy in the argument. We do need a good text-book article on "spinal irritation," or, as it has more recently been called, "neurasthenia." And on hysteria, too, much more may be written with profit. Both of these are certainly "functional nervous diseases," and no one can say that they are not "common." The book is got up in good style; in fact, the "Library" of this year is much more dignified in appearance than it was last year. Upon the whole, we can cheerfully recommend this volume, and do not hesitate to say that it is as good as any that have yet appeared. The author placed the profession under obligations last year by translating Rosenthal for this series, and we feel assured that the publishers have selected good authors for the present year, although the term "standard" may not apply in every instance.

The Brain as an Organ of Mind. By H. Charlton Bastian, M. A., M. D., F. R. S., Professor of Pathological Anatomy and of Clinical Medicine in University College, London, etc. With one hundred and eighty-four illustrations. New York: D. Appleton & Co., 1880. Pp. xi–708.

This work is without preface, introduction, or statement of its intended scope or design. The author's name is familiar in association with his unsuccessful efforts to establish the doctrine of spontaneous generation, and his controversy on the subject with Professor Tyndall. It would seem probable that, with great learning, industry, and intelligence, he yet lacks a certain power of mental perspective, a faculty of duly estimating the relative value of evidence or the logical force of facts. For example, on the second page of the present work, he assigns as the *causes* of the lack of complexity of vegetable life the facts that plants, as a rule, live on inorganic materials, and, as a rule, again, have no power of movement except by growth. To Dr. Bastian's mind, here lies the *reason* that plants have no nervous system. But there is no *causation* shown here, and, if there were, the exceptions to such rules would remain undisposed of. He remarks that many of the lowest forms of life can not be assigned positively to either the animal or the vegetable kingdom, and that they are variable, both as individuals and in their descendants, now appearing more like animals, and now more like vegetables. Attention is then called to the existence of saline substances in colloidal and in crystalloid forms, according to different influences to which they have been subjected; and to the various "allotropic" conditions of certain elementary substances. Dr. Bastian leaps to the conclusion that transformations from the vegetable to the animal modes of growth, and the reverse, take origin from different allotropic states of living matter!

The book is full of interesting information, showing wide research, and is well illustrated with cuts. It begins with considering the uses, origin, and structure of a nervous system in general, and treats successively of that of various classes of animals in ascending series; of the scope of mind; of reflex action, sensation and perception, instinct, etc.; of the development and structure of the human brain, and its functional relations; of phrenology and modern localization of functions; of the will and voluntary movement; and of speaking, reading, and writing in their relations with thought.

The author is a materialist, and believes that every higher intellectual and moral process is absolutely dependent upon functional activity of the brain; but in the same breath rejects the doctrine that human beings are mere "conscious automata." He holds conscious states or feelings to be an actual outcome of nerve action, no more capable of being dissevered from the physical conditions on which they depend than is heat to be dissevered from its physical conditions; yet he repudiates the idea of an "automatism" which would consign free will, duty, and moral obligation to a common grave. If there is inconsistency here, the author does not perceive it, or, at any rate, does not attempt to reconcile it.

Books and Pamphlets Received.—A Text-Book of the Physiological Chemistry of the Animal Body, including an Account of the Chemical Changes occurring in Disease. By Arthur Gamgee, M. D., F. R. S., Professor in the Victoria University, Manchester, etc. With illustrations. Vol. i. London: Macmillan & Co., 1880. Pp. xix–487. [Price, $4.50.] ═══ A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A. M., M. D., LL. D., Surgeon to Bellevue Hospital, New York, etc. Sixth edition, revised and improved. Illustrated with three hundred and fifty-two woodcuts. Philadelphia: Henry C. Lea's Son & Co., 1880. Pp. xxiv–27 to 909, inclusive. ═══ Treatise on Therapeutics. Translated by D. F. Lincoln, M. D., from French of A. Trousseau, Professor of Therapeutics in the Faculty of Medicine of Paris, etc., and H. Pidoux, Member of the Academy of Medicine, etc. Ninth edition, revised and enlarged, with the assistance of Constantin Paul, Professeur agrégé, etc. Vol. iii. New York: William Wood & Co., 1880. Pp. iv–379. [Wood's Library of Standard Medical Authors.] ═══ The Compend of Anatomy. For Use in the Dissecting Room and in Preparing for Examinations. By John B. Roberts, A. M., M. D., Lecturer on Anatomy and on Operative Surgery in the Philadelphia School of Anatomy, etc. Philadelphia: C. C. Roberts & Co., 1881. 12mo, pp. 191.

===== Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, A. M., M. D., Clinical Lecturer on Diseases of the Skin, College of Physicians and Surgeons, New York, etc. Parts i, ii, and iii. New York: E. B. Treat. 4to, pp. 32. ===== Wood's Ophthalmic Test-Types and Color-Blindness Tests. New York: William Wood & Co. ===== Clinical Notes on Nerve Injuries. By J. H. Pooley, M. D. Columbus, O. Pp. 14. ===== Quarterly Report of Medical Officers, United States Army, with their Stations and Duties, as reported to the Surgeon-General October 1, 1880, or at date of last report received at this office. Washington: Surgeon-General's office. Pp. 11. ===== Acts of the Legislature of Louisiana establishing and regulating Quarantine . . . also, Rules and Regulations of the Board of Health of the State of Louisiana, and Health Ordinances of the City of New Orleans, collected and classified . . . by Joseph Jones, M. D., President of the Board of Health of the State of Louisiana. New Orleans: J. S. Rivers, 1880. Pp. viii–97–v. ===== Annual Report of the Supervising Surgeon-General of the Marine-Hospital Service of the United States, for the fiscal year 1880. Washington: Government Printing-Office, 1880. ===== Report of the Pennsylvania Hospital for the Insane for the year 1879. By Thomas S. Kirkbride, M. D., Physician-in-chief and Superintendent. ===== Albany Medical College. Catalogue and Announcement, 1880–'81. 2d ed. ===== "The Sheltering Arms." Sixteenth Annual Report. New York, 1880. ===== Clinical Observations on the Radical Treatment of Fibroid Tumors of the Womb. By William Goodell, M. D. [Reprint.] ===== A Contribution to the Relative Value of the Different Operations for Delivery in Narrow Pelves; with the History of Eighteen Cases. By Aug. F. Erich, M. D., etc. Baltimore, Md. [Reprint.—From the author.] ===== On the Relations of the Placenta to Post-Partum Hæmorrhage. By Walter Coles, M. D., etc. [Reprint.] ===== Intra-Uterine Amputations. By Walter Coles, M. D., etc. [Reprint.] ===== Report of Ten Cases of Gastric Ulcer, etc. By A. Van Derveer, M. D., etc. [Reprint.] ===== A Contribution to the Study of Inflammation, as illustrated by Induced Keratitis. By W. F. Councilman, M. D. Prize Essay of the Baltimore Academy of Medicine. [Reprint.] ===== The Treatment of Spinal Curvature and Abscess by Inflation. By J. Holden Webb, M. R. C. S., etc. [Reprint.] ===== Enumeration, Classification, and Causation of Idiocy. By Isaac N. Kerlin, M. D. [Reprint.] ===== The Physician's Visiting List for 1881. Philadelphia: Lindsay & Blakiston. ===== Walsh's Physician's Combined Call-Book and Tablet. Fifth edition. Washington: Ralph Walsh, M. D. [Price, $1.50.] ===== Walsh's Physician's Handy Ledger. Washington: Ralph Walsh, M. D. [Price, $3.00.]

Reports on the Progress of Medicine.

QUARTERLY REPORT ON GENERAL MEDICINE.

No. IV.

BY W. H. KATZENBACH, M. D.,

ATTENDING PHYSICIAN FOR DISEASES OF THE CHEST TO THE OUT-DOOR DEPARTMENT OF BELLEVUE HOSPITAL.

1. Choffart.—De l'alimentation dans l'anorexie. "Progr. Méd.," Sept. 11, 1880.
2. Kyber, E.—Weitere Untersuchungen über die amyloide Degeneration. Virchow's "Archiv," lxxxi, 1, 1880.
3. Bull, E.—Et själdent Exempel på hurtig Udvikling af amyloid Degeneration. "Nord. med. Arkiv," xii, 1, 1880.
4. Hunt, J. W.—Observations on the blood in anæmia. "Lancet," July 17, 1880.
5. Salkowski, E.—Chemische Untersuchung von Leber und Milz in einem Fall von lienaler Leukämie. Virchow's "Archiv," lxxxi, 1, 1880.
6. Malassez, L.—Sur la leucocytose consécutive aux hémorrhagies. "Gaz. Méd. de Paris," Sept. 4, 11, 1880.
7. Hansen, E.—Et helbredet Tilfälde af Såkaldet "progressiv perniciös Anämi," med nogle epikritiske Bemärkninger om denne Sygdom. "Nord. med. Arkiv," xii, 1, 1880.
8. Bubenhofer, A.—Ueber sporadisches Vorkommen schwerer Malaria-Erkrankungen. "Dtsch. med. Woch.," Oct. 2, 9, 1880.
9. Ord, W. M., and Taylor, S.—Analysis of sixty-two cases of enteric fever treated in St. Thomas's Hospital in the autumn of 1879 and the ensuing winter. "St. Thomas's Hosp. Rep.," N. S., x.
10. De Santi.—Éruptions anormales dans la fièvre typhoïde à forme rénale. "Tribune Méd.," July 18, 1880.
11. Marvaud, A.—De la mort subite et par syncope dans la fièvre typhoïde, avec complications cardiaques. "Arch. Gén. de Méd.," Sept., 1880.
12. Eberth, C. J.—Die Organismen in den Organen bei Typhus abdominalis. Virchow's "Archiv," lxxxi, 1, 1880.
13. Chaillé, S. E.—The origin and some properties of the poison of yellow fever and of other specific spreading diseases. "New Orleans Med. and Surg. Jour.," Oct., 1880.
14. Cohen, J. S.—On diphtheria. "Med. News and Abstr.," Oct., 1880.
15. Coesfeld.—Zur rationellen Behandlung der Diphtherie. "Dtsch. med. Woch.," Aug. 28, 1880.
16. Reed, A. F.—Diphtheria, and the resulting paralysis. "Boston Med. and Surg. Jour.," Aug. 12, 1880.
17. Wood, H. C., and Formad, H. F.—Research on the effects of inoculating the lower animals with diphtheritic exudation. "Nat. Bd. of Health Bulletin," Suppl. No. 7.
18. Nœrregaard, A. G.—Abortivbehandling af Erysipelas. "Norsk. Mag. f. Laegevidensk.," III, x, 5, 1880.

19. Leudet.—Contribution à l'histoire des accidents de la convalescence de la variole. "Gaz. Hebdom.," Sept. 17, 1880.

20. Henderson, F.—On influenza; its symptoms, varieties, and causes, etc. "Glasgow Med. Jour.," May, June, Oct., 1880.

21. Proust, A.—Note sur l'œdème aigu rhumatismal. "Progr. Méd.," Aug. 28, 1880.

22. Peacock, T. B.—Statistical report on cases of rheumatic fever treated during the years 1872 to 1876, inclusive. "St. Thomas's Hosp. Rep.," N. S., x.

23. Pepper, W.—Some practical remarks on chronic rheumatism. "Arch. of Med.," Oct., 1880.

24. Thomas, W. R.—On irregular gout, with remarks on the pathology of gout. "Lancet," Sept. 25, 1880.

25. Petrone, L. M.—Sul nesso tra il reumatismo e la corea—nuova teoria del ballismo. "Giorn. Internaz. delle Sci. Med.," ii, 5, 1880.

26. Gowers, W. R.—On paralytic chorea. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.

27. Pitres, A.—Nouveaux faits relatifs à l'étude des localisations cérébrales. "Progr. Méd.," Aug. 7, 1880.

28. Wernicke, C.—Zur Symptomatologie der Hirntumoren. "Dtsch. med. Woch.," July 10, 17, 1880.

29. Brown-Séquard, C. E.—The effects produced by various lesions of the base of the brain on the excitability of the so-called motor centers. [Brit. Med. Assoc.] "Brit. Med. Jour.," Sept. 4, 1880.

30. Lépine, R.—Sur un cas de paralysie du mouvement et de la sensibilité des quatre derniers doigts, avec intégrité absolue du pouce (contribution à l'étude des localisations corticales). "Rev. Mens. de Méd. et de Chirurg.," Oct., 1880.

31. Luys, J.—Contribution à l'étude anatomo-pathologique de la paralysie agitante.—De l'hypertrophie des cellules nerveuses de la région protubérantielle. "Gaz. Méd. de Paris," July 17, 1880.

32. Poole, T. W.—A new aspect of facial paralysis. "Med. Record.," Aug. 28, 1880.

33. Hammond, W. A.—The therapeutical use of the magnet. "N. Y. Med. Jour.," Nov., 1880.

34. Debove, M.—Note sur deux nouveaux faits d'hémiplégie de la motilité et de la sensibilité. Guérison par une application d'aimants. "Arch. de Neurol.," July, 1880.

35. De Watteville, A.—On the pathogeny of lead palsy. "Lancet," July 10, 1880.

36. Hammond, W. A.—On thalamic epilepsy. "Arch. of Med.," Aug., 1880.

37. Salomon, B.—Ueber Ermüdungs-Epilepsie. "Dtsch. med. Woch.," Aug. 21, 28, 1880.

38. Hazard, W. B.—Consciousness in epilepsy. "St. Louis Clin. Record," Aug., 1880.

39. Debove, M., et Boudet de Paris, M.—Recherches sur l'incoordination motrice des ataxiques. "Arch. de Neurol.," July, 1880.

40. Krishaber, M.—Du spasme laryngé dans l'ataxie locomotrice. "Gaz. Hebdom.," Oct. 8, 1880.

41. Lange, C.—Om Behandlingen af Iskias ved Kauterisation af Helis auris. "Hospitals-Tidende," Sept. 8, 1880.

42. Finny, J. M.—A case of hydrophobia. "Dublin Jour. of Med. Sci.," July, 1880.

43. Venturi, S.—Di due casi di idrofobia. "Gazz. Med. Ital. Prov. Venete," Oct. 9, 16, 1880.

44. Paul, C.—Du traitement du tremblement et des autres troubles de la coordination du mouvement par les bains galvaniques. "Bull. Gén. de Thérap.," Sept. 15, 1880.

45. Stone, W. H.—On hysteria and hystero-epilepsy. "St. Thomas's Hosp. Rep.," N. S., x.

46. Bristowe et al.—Discussion on hysterical anæsthesia. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.

47. Putnam, J. J.—A series of cases of paræsthesia, mainly of the hands, of periodical recurrence, and possibly of vaso-motor origin. "Arch. of Med.," Oct., 1880.

48. Whittaker, J. T.—Writer's cramp. "Detroit Lancet," Sept., 1880.

49. Hamilton, D. J.—A brief résumé of pathological researches on tubercle and allied affections of the lung. [Brit. Med. Assoc.] "Brit. Med. Jour.," Sept. 4, 1880.

50. Eklund, F.—Le vere cause della tisi miasmatico-contagiosa e della pneumonite cronica, e la loro profilassi. "Gazz. Med. Ital. Prov. Venete," Sept. 11, 1880.

51. Whittaker, J. T.—The contagion of consumption. "Med. Record," July 24, 1880.

52. Kenworthy, C. J.—On climate in the prevention and cure of pulmonary consumption, with special reference to the Peninsula of Florida. "N. Y. Med. Jour.," Oct., Nov., 1880.

53. Marcet, W.—On the influence of altitude with reference to the treatment of pulmonary disease. "Brit. Med. Jour.," Oct. 2, 1880.

54. Von Kaczorowski.—Die Anwendung der kalten Luft bei Phthisikern. "Dtsch. med. Woch.," Oct. 9, 1880.

55. Anderson, T. M. McC.—On the curability of attacks of acute phthisis (galloping consumption). [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.

56. Zuber, C.—La pneumothérapie. "Gaz. Hebdom.," Sept. 24, 1880.

57. Ferrand.—De l'hémoptysie. "Gaz. Méd. de Paris," July 24, 31, Aug. 7, 1880.

58. Katzenbach, W. H.—A report of six cases of pleuritic effusion treated by aspiration. "N. Y. Med. Jour.," Aug., 1880.

59. Garel, J.—De la numération des globules blancs et rouges dans la pleurésie purulente. "Lyon Méd.," Aug. 8, 1880.

60. Cabot, A. T.—The antiseptic treatment of empyema. "N. Y. Med. Jour.," Aug., 1880.

61. Fiedler, A.—Zur Technik der Thoracocentese. "Dtsch. med. Woch.," Sept. 18, 1880.

62. Böhme, M.—Primäres Sarco-Carcinom der Pleura. Virchow's "Archiv," lxxxi, 1, 1880.

63. Russell, J.—An illustration of the specific aspect of pneumonia. "Brit. Med. Jour.," July 3, 1880.

64. Thomayer, J.—Pneumonie desquamative. "Gaz. Hebdom.," July 23, 1880.

65. Thompson, R. E.—On the percussion-note of emphysema. "Brit. Med. Jour.," July 17, 1880.

66. Brébion, F.—Contribution à l'étude de la température de la paroi thoracique chez les phtisiques. "Rev. Mens. de Méd. et de Chir.," July, 1880.

67. Lancereaux.—Des anomalies cardiaques. "Gaz. des Hôp.," Sept. 2, 4, 7, 9, 14, 21, 23, 30, 1880.

68. Debove, M.—Note sur les rapports des affections cardiaques et rénales. "Union Méd.," Oct. 3, 1880.

69. Dukes, C.—Endocarditis from very slight rheumatism. "Lancet," Sept. 4, 1880.

70. Blachez.—Maladie du cœur.—Lésions multiples.—Bruits anormaux inexplicables. "Gaz. Hebdom.," Aug. 6, 1880.
71. Notta, M.—Note sur un cas de bruit de moulin observé à la suite d'un traumatisme de la poitrine. "Union Méd.," Oct. 14, 1880.
72. Potain.—Du régime lacté dans les maladies du cœur. "Tribune Méd.," Sept. 5, 19, 1880.
73. Balfour, G. W.—Note on the mode in which compensation is established in cases of aortic incompetence. "Edinb. Med. Jour.," July, 1880.
74. Sutton, R. S.—Aneurism of the arch of the aorta, cured by rest, restricted diet, and iodide of potassium and ergot. "Am. Jour. of the Med. Sci.," Oct., 1880.
75. Drasche.—Ueber Aneurysmen der Leberarterie. "Wien. med. Woch.," Sept. 11, 18, 25, 1880.
76. Cornillon, J.—Caractères généraux des localisations douloureuses dans les coliques hépatiques et néphrétiques. "Progr. Méd.," Aug. 7, 14, 1880.
77. Choostek, Fr.—Gallensteine. "Allg. wien. med. Zeitung," Sept. 7, 1880.
78. Oliver, T.—Cirrhosis of the liver of an infant three months old. "Brit. Med. Jour.," June 5, 1880.
79. Potain.—Cirrhose hypertrophique. "Gaz. des Hôp.," Sept. 14, 1880.
80. Ewart, J.—Primary cancer of the liver. "Brit. Med. Jour.," Sept. 25, 1880.
81. Wertheim, G.—Behandlung der Enuresis (nocturna und diurna). "Wien. med. Woch.," June 19, 1880.
82. Pagès, J.—À propos du rein flottant. "Concours Méd.," Oct. 16, 1880.
83. Stiller.—Wanderniere und Icterus. "Berl. klin. Woch.," Sept. 20, 1880.
84. Brigidi, V., e Severi, A.—Contributo alla patogenesi delle cisti renali. "Lo Sperimentale," July, 1880.
85. Gairdner, W. T.—On the treatment of Bright's disease, with special reference to the use of diuretic remedies. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.
86. Seguin, E. C.—On occipital headache as a symptom of uræmia. "Arch. of Med.," Aug., 1880.
87. Estelle, A.—Contribution à l'étude des matières albuminoïdes contenues dans l'urine albumineuse. "Rev. Mens. de Méd. et de Chir.," Sept., 1880.
88. Anderson, E. C.—On the presence of leucin and tyrosin in the urine in numerous diseases. [Brit. Med. Assoc.] "Brit. Med. Jour.," Sept. 4, 1880.
89. Ramlot, A.—De la pathogénie de l'hémoglobinurie a frigore. "Rev. Mens. de Méd. et de Chir.," Sept., 1880.
90. Lépine, R.—Contribution à l'étude de l'hémoglobinurie paroxystique. "Rev. Mens. de Méd. et de Chir.," Sept., 1880.
91. Pauli, C.—Weitere Beiträge zur periodischen Hämoglobinurie. "Memorabil.," xxv, 8, 1880.
92. Bigelow, H. R.—Filaria sanguinis hominis and filaria disease. "Med. and Surg. Reporter," Sept. 25, 1880.
93. Comucci, E., e Bianchi, A.—Contributo alla storia delle occlusioni intestinali. "Lo Sperimentale," July, 1880.
94. Hardman, W.—Treatment of choleraic diarrhœa by the hypodermic injection of morphia. "Lancet," Oct. 2, 1880.
95. Campbell, A. M.—Kumyss in the treatment of cholera infantum. "Am. Jour. of Obstet.," Oct., 1880.

96. Babesiu, V.—Ueber einen im menschlichen Peritonäum gefundenen Nematoden. Virchow's "Archiv.," lxxxi, 1, 1880.

97. Inglis, T.—Two cases of myxœdema. "Lancet," Sept. 25, 1880.

98. Hammond, W. A.—On myxœdema, with special reference to its cerebral and nervous symptoms. "St. Louis Clin. Record," July, 1880.

99. Bourneville et D'Olier.—Note sur un cas de crétinisme avec myxœdème (cachexie pachydermique). "Progr. Méd.," Aug. 28, 1880.

100. Hofmokl.—Ueber das Cephalämatom bei Neugeborenen, und über drei diessbezügliche Beobachtungen bei ein- und mehrjährigen Kindern. "Arch. f. Kinderheilk.," i, 9, 1880.

101. Cruse, P.—Beiträge zur Kenntniss des Icterus neonatorum. "Arch. f. Kinderheilk," i. 10, 11, 1880.

102. Schultze, B. S.—Zur Kenntniss von den Ursachen des Icterus neonatorum. Virchow's "Archiv," lxxxi, 1, 1880.

103. ———.—De l'allaitement artificiel. "Concours Méd.," May 29, 1880.

104. Parker, R. W.—Short papers on some common diseases in young children.—Glandular enlargements in the neck. "Obstet. Jour. of Gt. Brit. and Ire.," June, 1880.

105. Lawrence, H. C.—On infantile rickets. "Lancet," Oct. 2, 1880.

106. Smith, A. A.—Convulsions in children. "Am. Jour. of Obstet.," July, 1880.

107. Oltramare, H.—De la nature de la coqueluche.—Traitement par l'acide phénique. "Progr. Méd.," Oct. 2, 1880.

108. Medin, O.—Meningitis cerebro-spinalis epidemica infantum. Ett Bidrag till Kännedomen om Sjukdomarna bland de späda Barnen på All'n. Barnhuset i Stockholm under Åren 1842–76. "Nord. Med. Arkiv," xii, 2, 1880.

109. Chadbourne, E. R.—Observations upon an epidemic of measles at the New York Foundling Asylum, with cases illustrating complications and sequelæ. "Am. Jour. of Obstet.," Oct., 1880.

110. Facen, J.—I morbilli. "Gazz. Med. Ital. Prov. Venete," Aug. 7, 1880.

111. De Giovanni, A.—Un caso di contemporaneità del morbillo e della scarlattina. "Gazz. Med. Ital. Prov. Venete," Oct. 9, 1880.

112. Prince, D.—A case of scarlet fever, showing a definite period of incubation of twenty-one days. "St. Louis Med. and Surg. Jour.," July 20, 1880.

113. Hajek, S.—Ueber die Ursachen und den Verlauf der Urämie bei Nephritis nach Scharlach. "Arch. f. Kinderheilk.," i, 10, 11, 1880.

114. Henderson, R. T.—Rötheln, German measles, etc. "St. Louis Courier of Med.," June, 1880.

115. Hemming, W. D.—On Rötheln, rubeola, or German measles. "Edinb. Med. Jour.," July, 1880.

116. Gowers, W. R.—A note on an outbreak of rubeola (Rötheln). "Lancet," July 31, 1880.

117. Robinson, J.—The diagnosis of Rötheln. "Brit. Med. Jour.," June 19, 1880.

118. Robinson, J.—The diagnosis of Rötheln. "Med. Times and Gaz.," Oct. 16, 1880.

119. Archambault.—Traitement de la fièvre typhoïde chez les enfants. "Gaz. des Hôp.," Sept. 18, 1880.

120. Wendt, E. C.—A contribution to the pathological histology of acute parotitis. "N. Y. Med. Jour.," Sept., 1880.

121. Bérenger-Féraud.—Le tænia à l'hôpital Saint-Maudrier. "Bull. Gén. de Thérap.," July 30, Aug. 15, 1880.

122. Peabody, G. L.—A supplementary note on persistent priapism. "N. Y. Med. Jour.," Sept., 1880.

123. Osler, W.—On the systolic brain murmur of children. "Boston Med. and Surg. Jour.," July 8, 1880.

21. An affection known as *acute rheumatismal œdema* has been recognized and described several times during the past few years, and in the present article two more well-marked cases are reported. In one, in the course of a sub-acute articular rheumatism, without serious complications of any kind, along with the eruptions that are common, there suddenly appeared œdematous, painful spots on the limbs. These spots, red, tender, and showing increased heat, resembled certain forms of phlegmonous erysipelas, from which, however, they were distinguished by their origin, course, and termination, to say nothing of their objective characters. Like phlegmons, these spots were red, swollen, and painful, but these characteristics were less marked, and were not accompanied by great tension or active fever. Suppuration, moreover, was never noticed. The redness was not more marked than is the case in erysipelas, and there was no glandular involvement, as in cases of lymphangeitis. Venous thrombosis and phlebitis were decided against on account of the absence of painful ridges in the tracts of the veins, and the irregular distribution of the spots. This rheumatismal œdema belongs to the class of partially inflammatory œdemas, and is without doubt due to sero-fibrinous exudation into the meshes of the subcutaneous cellular tissue. The immediate cause of this exudation is not known, but that it is a complication of rheumatism, and in some manner due to the rheumatismal process, has already been pointed out by several authors. In a few days the complication disappears without leaving any trace, and its occurrence is by no means so serious a matter as to affect the general progress of the case.

24. Dr. Thomas looks upon *gout*, when not hereditary, as a disease invariably produced by excessive indulgence in food or drink, oftentimes accompanied by want of exercise. Excess of food, by supplying excess of nitrogenous materials for the blood, tends ultimately to produce excess of urea and uric acid, which have to be expelled by the kidneys. These organs perform their function properly for a while, but the excessive work thrown upon them for a considerable time ultimately tends, as in chronic alcoholism and affections which interfere with the action of the skin, to produce disease and consequent inefficient action of the kidneys. When the kidneys act imperfectly, and there is consequent retention of certain materials in the blood, these are taken up by cartilage, fibrous tissue, and epithelial cells, and produce gout. Gout presents itself in so many different forms that it is often difficult to recognize it when we meet with it, and many cases of real gout are no doubt frequently overlooked because the disease has not been found in its accustomed seat. One patient suffers from bronchitis, another from psoriasis; one may have gravel, with or without albuminuria, another may have gout in his great toe. It may present itself as asthma, or again as neuralgia of the face. One may be alarmed by his having to be treated for apparent gonorrhœa, while another may have diarrhœa, with piles and tenesmus—all of which diseases may be but local exhibitions of the constitutional diathesis.

38. Dr. Hazard does not regard loss of *consciousness*, or of the memory of consciousness, as pathognomonic of *epilepsy*, and objects to classing as epileptoid those cases in which there is a retention of consciousness or of a memory of what occurred during the seizure. The patient suddenly loses the use of a greater or less part of his higher nervous ganglia by the occurrence of an "excessive discharge of unstable gray matter," or from some sudden change in the blood supply of these higher centers. If the area of nervous structure involved be great, and include the highest centers, then unconsciousness results. If lower structures or a less area of the higher ones are affected by the morbid process, disturbance of function, not abolition thereof, occurs. In either case the disease is essentially the same; there is a variation in degree, not in kind. He gives the notes of a case illustrating the varying conditions of consciousness as observed in an undoubted epileptic.

49. The following is a résumé of Dr. Hamilton's paper: 1. *Tubercle of the lung* is always the result of irritation of an endothelium by a peculiar chemical agent, probably a ferment, produced in the softening of a caseous mass. 2. The source of this caseous infection may be situated in any tissue. 3. Tubercle may be primary or secondary in the lung. By primary tubercle of the lung is meant a disease in which the tubercle forms the first and only lesion, the caseous source of infection being situated in some distant organ or tissue. By secondary tubercle is meant a disease in which the caseous deposit is the primary disease in the lung, and the tubercle is of secondary occurrence. 4. In the primary form the caseous ferment is brought to the lung from some distant part by the blood-vessels, and the tissue first irritated by it is the endothelium of the alveolar capillaries. In the secondary form of the disease the lymphatics absorb the caseous irritant, and it is from their endothelium that the tubercle originates. 5. A tubercle, wherever it exists, is invariably composed, when fully developed, of the following parts: (a) one or more giant cells; (b) a reticulum formed by processes given off from the sides of the giant cell, on which nuclei lie as on any connective tissue; (c) a peripheral capsule. 6. The giant cell represents an over-developed connective-tissue corpuscle. The processes correspond with an attempt on its part to throw out an organized periplast. 7. The action of the irritant, which gives rise to the abnormal activity of the blood-vascular or lymphatic endothelium, is apparently evanescent, and, when its energy is expended, all the structures surrounding the tubercle develop into fibrous tissue. By so doing, if the subject outlives the acute attack, a cirrhosis of the lung or other organ is frequently induced. 8. The commonest cause of the primary form is the softening of a caseous gland. That of the secondary is chiefly either a caseous catarrhal pneumonia, or a chronic interstitial pneumonia with bronchiectatic cavities containing caseous débris. Tubercle, especially the secondary form, is a commoner disease of the lung in adults than in children or youth. The primary form is oftener met with in childhood. 10. Catarrhal pneumonia passes through three stages. The first is the acute or subacute, in which the alveolar epithelium proliferates. The second is the stage of caseification, in which the elements so formed, and which have accumulated in the air vesicles, become caseous. The third is the stage in which the necrotic caseous matter softens and forms cavities. 11. The softening is a purely chemical process. 12. Small tubercles are commonly found in the neighborhood of the cavities; but they are usually invisible to the naked eye—the bodies pointed out as tubercles being isolated catarrhal pneumonic nodules. 13. Tubercles developed in such a part have very little to do with its disintegration. They rather tend, by their fibrous organization, to induce cicatrization. 14. There is no such thing as "tubercular phthisis," in the sense of a primary tuberculous deposit, leading to destruction of the lung substance by softening and excavation of the individual tubercles. They certainly become caseous in the center; but as soon as resolution occurs in the caseous part, the resulting débris is absorbed, and the capsule at the periphery contracts so as to obliterate the cavity. 15. Secondary tubercle of the lung is frequently associated with bronchiectasis. The bronchiectatic cavities are apt to be mistaken for those formed by destruction of the lung tissue, or true phthisical excavations. 16. There is a form of catarrhal pneumonia in which the caseous nodules are distributed throughout the whole lung, and which is very apt to be mistaken for tubercle. It is not uncommon, and generally occurs in children.

55. In his article on the *curability of acute phthisis*, Dr. Anderson means an acute pulmonary affection, accompanied by a high and continuous fever, running a rapid course, and leading invariably to more or less destruction of lung tissue, if the patient survive long enough. He recognizes three varieties of the disease: 1. Acute pulmonary tuberculosis; 2. Acute pneumonic phthisis; 3. Acute pneumonic phthisis, complicated secondarily with the development of gray miliary tubercles. He thinks it impossible to distinguish the second from the third variety during life, but that the first may be suspected when the disease sets in suddenly with high fever, great prostration, profuse perspiration, lividity, and great acceleration of breathing, and when these symptoms are out of all proportion to the results obtained from a physical examination of the chest. Though the profession are very hopeless as to such cases, he has obtained excellent results, in a good many cases, from treatment of which the following is an outline. 1. Careful, skilled nursing, with constant feeding, and stimulants in small quantities often (from four to ten fluidounces daily). 2. Each night a subcutaneous injection of $\frac{1}{100}$ to $\frac{1}{65}$ of a grain of atropia. 3. Remedies especially adapted to the removal of fever: (a) ice-cloths to the abdomen; (b) quinia, ten to twenty grains in a single dose, once daily; (c) a pill composed of one grain of quinine, half a grain of digitalis, and from a quarter to three quarters of a grain of opium, every four hours. In addition to this, special symptoms—diarrhœa, constipation, and the like—must be treated on ordinary principles, and, of course, the treatment indicated must not be used in a mere routine way, but adapted to the surroundings of each individual case.

66. Dr. Brébion has contributed an interesting and important study of the *temperature of the thoracic wall in cases of disease of the lungs.* With a very delicate surface thermometer he first ascertained that in healthy persons there was no difference in temperature on the two sides of the thorax in the clavicular regions, and that in health the temperature was higher in the evening than in the morning. Also he ascertained that the aorta was a center of heat, as shown by measurements on the left side of the spine, in the course of that vessel. In certain patients he found an increase in temperature on one side of the chest, in others on both; but, when there was an increase on both sides, it was always higher on one than on the other, although the side on which it was higher might change from left to right or from right to left. This increase he attributes, in part at least, to a reflex vaso-motor action, when found, as it generally is, in persons suffering from phthisis. The greatest increase will be found on the side on which the disease is most recent—in other words, where the pulmonary congestion is most intense. He concludes, therefore, that the surface thermometer may serve in the diagnosis of congestion, and indirectly in that of phthisis.

73. The following is an abstract of Dr. Balfour's paper on *compensation in aortic incompetence.* Ceradini has shown that the valve segments are not closely applied to the arterial wall during the ventricular systole, but float in an intermediate position, maintained in equilibrium by the central or axial stream on the one hand, and on the other by reflex currents which, originating at the exterior of the axial stream, flow outward and downward against the arterial wall, and are reflected from it upon the posterior surface of the segments of the aortic valves. These statements seem to prove conclusively that the coronary arteries are patent to the blood flow during the ventricular systole; and, when we reflect that the coronaries are flushed not merely by a reflux current of unknown value, but, in accordance with Pascal's law, by a blood current having the minimum aortic pressure of 200 mm. Hg., we see that the cardiac muscle is freely supplied with highly oxygenated and nutritive blood at the very moment when it requires it most, when the transformation of energy from potential to kinetic within its substance is at its height. And this is in complete consonance with the fact that, except in very advanced cases of long standing, or where other causes also have been at work, the heart, in aortic incompetence, is always found to be well nourished and free from signs of degeneration. It also explains the remarkable fact that sufferers from aortic disease are not necessarily short-lived. They are certainly more liable to sudden death than other men, but they often lead useful and wonderfully long lives, quite unconscious of the existence of any serious disease. The dilatation rendered necessary by the overfilling of the left ventricle, into which blood flows from two sources instead of one, is provided for by the natural elasticity of the ventricular walls, and the increased power needed to expel the surplus blood is readily supplied by the reserve force of the heart, an organ which in health has always a considerable margin of latent energy upon which the maintenance of life itself depends in many morbid conditions. In accordance with Paget's law, the ventricular muscle slowly becomes hypertrophied, and the reserve energy is gradually supplemented and ultimately replaced by an actual increase of muscular force. In this way *dynamic* compensation is efficiently maintained for a long time, but perfect *structural* compensation is never attained, for the hypertrophy always lags behind the dilatation. Adopting Ceradini's view of the mode in which the heart is nourished, we can readily understand how this imperfect structural compensation may long preserve its dynamic perfection, even slowly advancing toward its natural termination when the hypertrophy has outgrown the feeding powers of the coronary arteries. Then the heart ceases to grow stronger, and, if its walls still grow thicker, this is due to venous congestion and the development of fibrous tissue; dilatation rapidly advances, by and by the segments of the mitral valves cease to meet, mitral regurgitation is established, and, if the patient is spared so long, though still liable to death from sudden asystole, the natural termination of his disease is now gradual asthenia and dropsy. This is the natural history of aortic incompetence, and it may embrace a period of not less than thirty-five years, though, from the numberless accidents which may derange the dynamic compensation, it seldom lasts so long. The history of aortic regurgitation is well fitted to awaken in our minds the highest admiration for the recuperative power of the heart, even when irremediably injured. It also teaches us the unadvisability, to say the least of it, of treating a disease of this character, with only signs and no symptoms, clearly showing that in these cases our duty is to watch and wait, carefully avoiding the *nimia diligentia*, yet prepared to act with energy and firmness at any moment.

QUARTERLY REPORT ON MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

No. III.

BY GASPAR GRISWOLD, M. D.

1. SMITH, W. W.—The improbability of any general "law of therapeutics." "Practitioner," July, 1880.
2. KANE, H. H.—Therapeutics as based on the study of tendencies. "Med. Record," Sept. 18, 1880.

3. Lussana, F.—Osservazioni pratiche sull' uso del salasso nelle pneumoniti. "Gazz. Med. Ital. Prov. Venete," July 17, 24, 1880.
4. Moeller.—De la médication révulsive. "Jour. des Sci. Méd. de Louvain," v, 9, 1880.
5. Spender, J. K.—On movement as a therapeutic agent. "Brit. Med. Jour.," Aug. 7, 1880.
6. Castillo, J. D.—The physiological action of alcohol on the circulation. "Phila. Med. Times," Oct. 23, 1880.
7. Richet, C.—De l'action de la strychnine à très forte dose sur les mammifères. [Acad. des Sci., Paris.] "Gaz. Méd. de Paris," July 31, 1880.
8. Müller, F.—Zur Messung und Dosirung des galvanischen Stroms in der Electrodiagnostik und Electrotherapie. "Memorabil.," xxv, 7, 1880.
9. Rothe, C. G.—Elektricität bei Colica saturnina. "Memorabil.," xxv, 8, 1880.
10. Ball, B.—Hemianæsthesia removed by static electricity. "Lancet," Oct. 2, 1880.
11. Dujardin-Beaumetz.—Des propriétés de certains bois appliqués sur la peau. "Bull. Gén. de Thérap.," Aug. 15, 1880.
12. Seure.—Sur les propriétés électriques de la cellulose, à propos des propriétés esthésiogènes de certains bois. "Bull. Gén. de Thérap.," Sept. 15, 1880.
13. Kilner, W. J.—A new medical galvanometer. "St. Thomas's Hosp. Rep.," N. S., x.
14. von Hake.—Beitrag zur Behandlung der Lyssa humana mittelst Curare. "Dtsch. med. Woch.," Oct. 2, 1880.
15. Simon, J.—De la scille dans la thérapeutique infantile. "Concours Méd.," Sept. 11, 1880.
16. Maclagan, T. J.—On the antimalarial action of the cinchona compounds. "Lancet," July 31, Aug. 7, 21, 1880.
17. Gray, L. C.—The use of quinine with nervous sedatives. "Arch. of Med.," Oct., 1880.
18. Whitmire, J. S.—Quinquinia—why it should be used by country practitioners. "Chicago Med. Jour. and Exam.," Aug., 1880.
19. Sewell, J. A.—Tea as a valuable therapeutic. "Canada Med. Record," Sept., 1880.
20. Ott, I.—The physiological action of urechites suberecta. "Therap. Gaz.," Oct., 1880.
21. Foulis, J.—Some of the uses of oil of turpentine. "Edinb. Med. Jour.," Aug., 1880.
22. Stewart, J.—The preventive treatment of hemicrania by cannabis indica. "Canada Med. and Surg. Jour.," Oct., 1880.
23. Jewell, J. S.—The use of bromine in contraction of the liver. "Chicago Med. Review," Sept. 20, 1880.
24. Clay, J.—Notes on Chian turpentine and its use in cancer. "Lancet," Oct. 2, 1880.
25. Jennings, O.—Sur l'emploi du mastic (térébenthine du pistacia lentiscus) dans le cancer de l'utérus. "Tribune Méd.," Aug. 15, 1880.
26. Catrin.—Note sur la pelletiérine. "Gaz. Hebdom.," Oct. 1, 1880.
27. Hunt, J. W.—Ergot in diabetes mellitus. "Practitioner," Sept., 1880.
28. Milbank, R.—A case of secondary peritonitis, treated with enormous doses of morphia. "Med. Record," Oct. 23, 1880.
29. Brower, D. R.—Hyoscyamia. "Chicago Med. Jour. and Exam.," Sept., 1880.
30. Greene, F. V.—On the physiological action of chamælirin. "Phila. Med. Times," Aug. 14, 1880.

31. Hallopeau.—De l'emploi du salicylate de soude dans la dothiénentérite et l'érysipèle. [Soc. Méd. des Hôp., Paris.] "Gaz. Hebdom.," Aug. 20, 1880.

32. Young, C. G.—Salicin, salicylic acid, and salicylate of soda in rheumatic fever. "Dublin Jour. of Med. Sci.," Sept., 1880.

33. Bokkenheuser, V. — Om Salicylsyrens Indvirkning på den akute Ledderevmatisme; en klinisk Undersögelse. "Nord. med. Ark.," xii, 1, 1880.

34. Hutchins, A.—Calcium salicylate in the serous diarrhœas of infants. "Proc. of the Med. Soc. of the County of Kings," Sept., 1880.

35. Smythe, G. C.—Hypodermic injections of atropiæ sulphas; a specific for sciatica. "St. Louis Med. and Surg. Jour.," Sept. 5, 1880.

36. Fronmüller.—Das bromwasserstoffsaure Homatropin. "Memorabil.," xxv, 7, 1880.

37. Desplats, H.—Note sur l'emploi de l'acide phénique comme agent antipyrétique. "Gaz. Hebdom.," Sept. 24, 1880.

38. Harley, J.—A second communication on fool's parsley (æthusa cynapium). "St. Thomas's Hosp. Rep.," N. S., x.

39. Macdonald, A. D.—On a new antiseptic and antineuralgic agent. "Edinb. Med. Jour.," Aug., 1880.

40. ———.—Stigmata of maize. [Editorial.] "Louisville Med. News," Sept. 11, 1880.

41. Bouchut.—Papaïne et autres pepsines tirées du *carica papaya* et du *ficus*. [Assoc. Franç. pour l'Avancem. des Sci.] "Progr. Méd.," Aug. 28, 1880.

42. Cabañas, G.—El jugo del carica papaya. "Cronica Méd.," Sept. 5, 20, 1880.

43. Ringer, S.—On the antagonisms of aconitia on the frog's heart. "Jour. of Physiol.," July, 1880.

44. Coosemans, E.—Du sulfate de cuivre ammoniacal dans la névralgie du trijumeau. "Jour. des Sci. Méd. de Louvain," Sept., 1880.

45. Brosius.—Ueber Bromkali, seinen Gebrauch und Missbrauch. "Irrenfr.," xxii, 7, 1880.

46. v. Hoffer, L.—Ein therapeutischer Versuch über die Anwendung des Pilokarpin bei Diabetes. "Wien. med. Woch.," Sept. 4, 11, 1880.

47. Lewin, L.—Untersuchungen über Wirkung und Verhalten des Tannins im Thierkörper. Virchow's "Archiv," lxxxi, 1, 1880.

48. Kormann.—Anwendung des Apomorphinum hydrochloricum crystallisatum purissimum als Expectorans. "Dtsch. med. Woch.," Aug. 28, 1880.

49. Demme.—Die Anwendung des bensoësauren Natrons bei der acuten Gastro-Enteritis des Säuglingsalters. [Vers. dtsch. Naturf. u. Aerzte in Baden-Baden.] "Med.-chir. Centr.-Bl.," Aug. 27, 1880.

50. Shoemaker, J. V.—The use of chlorate of potassium in furuncular and carbuncular affections. [Phila. County Med. Soc.] "Phila. Med. Times," Oct. 23, 1880.

51. Kormann.—Einreibungen von Sapo viridis gegen Scrophulose, besonders indurirte Lymphdrüsen scrophulöser Kinder. "Dtsch. med. Woch.," Aug. 28, 1880.

52. Carreras-Sauchis. — El cloruro de aluminio como hemostatico. "Cronica Méd.," Sept. 5, 1880.

53. Bourneville et d'Olier.—Action physiologique du bromure d'éthyle dans l'hystérie et l'épilepsie. [Soc. de Biol., Paris.] "Gaz. Méd. de Paris," Aug. 28, 1880.

54. Budde, V.—Fuksin som Middel mod kronisk Albuminuri. "Ugeskr. f. Læger," July 24, 1880.

55. Barnes, H.—On chronic accidental poisoning. "Practitioner," Sept., 1880.
56. Sabine, G. K.—Acute alcoholic poisoning. "Boston Med. and Surg. Jour.," Sept. 2, 1880.
57. Sonnenburg.—Untersuchungen über Chloroformtod. [Vers. deutsch. Naturf. u. Aerzte.] "Med.-chir. Centr.-Bl.," Aug. 20, 1880.
58. Hofmeier, J.—Ein Beitrag zur Casuistik der Vergiftungen mit chlorsaurem Kali. "Dtsch. med. Woch.," Sept. 18, 25, 1880.
59. Wegscheider, H.—Nachtrag zu dem "Beitrag zur Casuistik der Kali-chloricum-Vergiftungen" von Dr. J. Hofmeier. "Dtsch. med. Woch.," Oct. 2, 1880.
60. Zit, J.—Zur Casuistik der Carbolsäureintoxicationen bei Säuglingen. "Arch. f. Kinderheilk.," i, 12, 1880.
61. v. Genser, T.—Vergiftung durch Carbolsäure nach äusserer Anwendung derselben bei einem 14 Tage alten Kinde. "Arch. f. Kinderheilk.," i, 12, 1880.
62. Kessler, A.—Fatal poisoning by mushrooms. "Am. Jour. of the Med. Sci.," Oct., 1880.
63. Reckitt, D. T.—A case of quassia poisoning. [Newark Hospital.] "Lancet," Aug. 14, 1880.
64. Mills, T. W.—Clinical note on atropine poisoning. "Canada Med. and Surg. Jour.," Aug., 1880.
65. Lundy, C. J.—A case of marked intoxication, with delirium, from the use of duboisia in ophthalmic practice. "Michigan Med. News," Aug. 10, 1880.
66. Kilner, W. J.—A fatal case of poisoning by santonin, with some remarks upon its chemical properties. "St. Thomas's Hosp. Rep.," N. S., x.
67. Griswold, G.—A case of poisoning with homœopathic granules of "nux." "Med. Record," Oct. 2, 1880.

4. A somewhat speculative discussion of various hypotheses bearing upon the *modus operandi of poultices, cupping, blisters, etc.* The idea of the production of collateral anæmia in the diseased area by the induction of hyperæmia at the point of application of the poultice, etc., is not much favored. There is rather a leaning toward the view that the vascularity of parts at a distance may be affected by a reflex influence through the vaso-motor system of nerves. As analogous, are quoted the experiments of Dr. Mosso, showing that if one hand be held in cold water, the temperature of the other hand will fall seven or eight degrees, without the general body temperature having been perceptibly modified. It is suggested that further experimentation may show that certain superficial areas are *en rapport* with corresponding deeper ones, and that the vascularity of the latter may be influenced and even controlled by applications to the former.

7. If, after the introduction of a cannula into the trachea, artificial respiration be efficiently performed, *large doses of strychnia* may be administered to dogs without causing death, and the ensuing phenomena may be observed. If one centigramme [gr. $\frac{1}{6}$] of the chloride of strychnine be injected hypodermically, a violent convulsion soon occurs, which would be fatal, were it not for the respiration being kept up artificially. Larger and larger doses can then be injected without causing death, the symptoms varying with the amount given. At first, there is a tetanic spasm; afterward, a period characterized by incessant convulsive contractions of all the muscles. Still later, when the amount of strychnine administered exceeds the proportion of one sixth of a grain to every two pounds in the weight of the dog, a choreic stage is developed. When the whole amount of strychnine given exceeds the ratio of four sixths of a grain to every two pounds in the weight of the animal, a period of resolution supervenes. Reflex action is abolished; spontaneous efforts at respiration have ceased. The heart, tumultuous and irregular during the violent convulsions of the early stages, now contracts regularly, though rapidly. The pupil, at first widely dilated, is now markedly contracted. The arterial pressure, at first enormously increased, gradually falls. The temperature, much raised during the convulsions, falls below the normal. In this condition of resolution the animal may live several hours; but if the artificial respiration be but for a few seconds intermitted, or if a slight hæmorrhage occur, the heart at once succumbs and ceases to beat. Muscular irritability and the excitability of the motor nerves are preserved; the suspension of reflex action is therefore due to an effect upon the spinal cord. A condition of inexcitability seems to follow one of over-stimulation.

9. In this case of *lead colic treated with electricity*, there was obstinate constipation. Large doses of ordinary purgatives had been given without effect; these were followed with a mixture of castor-oil and croton-oil, which did not produce the desired effect, but finally brought on vomiting. Enemata were prescribed, but these also to no purpose. A faradaic battery was then obtained; the negative pole, armed with an electrode consisting of an insulated copper wire terminating in a copper ball, was introduced as far as possible into the rectum. The positive pole was then placed upon the abdomen, and a strong current was allowed to pass for eight or ten minutes. When the current was broken, the colicky pains had ceased. In ten or fifteen minutes a copious evacuation of the bowels occurred, followed by amelioration of all the symptoms and by recovery.

10. This case of *hemianæsthesia treated with static electricity* was that of an hysterical patient, nineteen years of age, anæsthetic on the right side, who had been treated to no purpose with the bromides and other sedative remedies for a considerable time. The galvanic and faradaic currents having been employed without effect, it was resolved to try franklinism. On July 30th, the patient was placed upon an insulating stool and "submitted for twenty minutes to the influence of the negative fluid of Nairn's static electrical machine." At the end of this time the patient suddenly fell to the floor; when she arose, the anæsthesia had entirely disappeared. The sensibility was tested with the æsthesiometer, and found to be perfect; there was no *transfert*, the sensation on the left side being the same as before the experiment. The recovery remained complete until the beginning of September, when the old symptoms began to reappear. She had then relapsed into her former condition, and the static electricity was to be tried again in a few days.

14. This is a most extraordinary account of a very interesting case of *hydrophobia treated with curare.* A man was bitten by a rabid dog on the 26th of June; was melancholy and despondent, and developed typical convulsions on the 16th of August. The old cicatrix at this time became inflamed again, and a line of reddened lymphatic vessels extended from the bite in the hand to the axillary glands. The first spasm was excited by an attempt to drink water. The patient was taken to the hospital and treated with curare. Large doses were given before a calmative effect was produced—in twenty-two hours and twenty minutes 382 milligrammes [gr. v$\frac{5}{6}$] hypodermically. Seven milligrammes [gr. $\frac{1}{10}$] of the same preparation killed a rabbit in a few minutes; the curare was therefore reliable. At this stage of the case everything seemed to be progressing favorably; the patient was happy and hopeful, and the spasms had ceased to occur. His wife, delighted to hear good reports of his condition, came in the street to the window of his room, and knocked, making gestures of delight. The patient became excited at this, and wished to leave the hospital; he then became furious, and beat upon the door of his room with feet and hands. *His excitement was such that no one dared to go into his room;* for several hours he continued to beat upon the door and cry out. *During this time he received no treatment, no one having the courage to enter his room.* The noise ceasing at last, some one dared to peep in, and saw the patient on the floor cyanosed and moribund—he died in a few minutes. [What would have been the result under ordinary circumstances, no one can say. The very unusual conditions attending its termination place this case quite beyond the pale of ordinary criticism.]

17. As a result of extended chemical experience in the *use of quinine with nervous sedatives*, the author believes that quinine will increase the sedative effect of the bromides, belladonna, and hyoscyamia, while it simultaneously decreases or dispels the depression which these medicines usually produce; he does not attempt any explanation of the *modus operandi.* In epileptics, it is his habit to give the bromides until bromism has been induced, and then to give, together with them, two or three grains of quinine three times daily. He admits that there are some epileptics, of excellent general health, to whom quinine seems injurious, and who bear full sedation with the bromides very well; but he insists that these are very exceptional cases. He adds quinine to considerable doses of the sedatives above mentioned, in all cases where the patients are pale, languid, and anæmic.

20. A careful and thorough course of experiments by Dr. Ott shows that in man, as in the lower animals, *urechites suberecta* depresses the pulse, causes salivation, perspiration, vomiting, and diarrhœa. It is a powerful poison, even in small quantities, killing mainly by its depressing action upon the heart. Digitalis is suggested as antidotal. It most resembles aconite in its effects, except that it does not paralyze the pneumogastrics, and that it affects respiration less. Its therapeutic application is still an open question.

22. From an extended experience with *cannabis indica in hemicrania*, the author concludes that the drug is useful in the variety of the affection which is attended with arterial spasm—the same class of cases in which nitrite of amyl is beneficial. The curative effect of hemp in these cases is due to its action as a vascular dilator. In the opposite class of cases—the "neuro-paralytic variety of hemicrania"—attended with flushed face and throbbing temples, cannabis indica does harm: ergot is more applicable to this latter class. The diagnosis made, the extract of cannabis indica should be given for six months at least, one quarter to three quarters of a grain three times a day. [The possibility of establishing a habit by so continued an administration is not mentioned by the author.]

24. The author regrets that so many members of the profession have been unable to produce benefit with *Chian turpentine in cancer of the uterus*, as proposed by him. He attributes the failures in these cases partly to lack of perseverance, but mainly to the fact that in most of the cases real Chian turpentine has not been used. He states that a supply may shortly be expected, when the purity of the drug at least may be definitely determined. The mild terebinthinate taste of the real article, its peculiar odor, and its property of solidifying on exposure to the atmosphere, are characters sufficient to distinguish it from any other turpentine-resin. Additional experience fully confirms the statements made in his original paper as to the efficacy of Chian turpentine in cancer; in the cases previously reported, the cancer has disappeared, and there are no signs of its return. The treatment is found efficient even in cases that are far advanced. The treatment must be patiently continued for two months at least, and not abandoned after a week's trial; the first symptoms of improvement are cessation of pain and hæmorrhage. It is believed that the turpentine destroys the cancer cells, and causes the death of the growth, which gradually shrinks, dries up, and finally disappears altogether. As a result of the treatment of eleven cases of uterine cancer, the author feels justified in assuring the profession that, given a case of cancer limited to the uterus, and a steady use of Chian turpentine for six or eight months, "a disappearance of the cancer may be reasonably expected." Cancers of the breast, rectum, and stomach are being treated by him at the present time with most gratifying results. He hopes before long to give a more exhaustive account of his cases. He warns the profession that, in the mixture, *fresh mucilage of tragacanth, and enough of it to dissolve the turpentine thoroughly*, should be used; and that, in cases where pills are given, the evacuations should be examined, to see if they have been digested, and the cause inquired into if they have not. The mixture may be alternated with the pills, where the latter are not well digested.

27. The author speaks very highly of the use of *ergot in diabetes mellitus*, and reports two cases. He gives to Dr. Pepper, of Philadelphia, the credit of having been the first to propose the treatment. No attempt is made to explain the mode of action of the medicine; its efficacy is inferred from clinical observation, and is conjectured to be in some way dependent upon the influence of the drug upon the vaso-motor system. A drachm, or a drachm and a half, of the fluid extract of ergot is given three times a day until the symptoms have markedly abated or entirely disappeared; with this is combined the ordinary antidiabetic diet. The two cases reported were ordinary ones, presenting no special features. The first was under observation for four months, at the end of which time the urine was normal in quantity, and no longer contained sugar. This patient gained weight during the treatment, and considered himself well when discharged. Several times during the progress of the case the diet was intermitted for considerable periods, the ergot being continued as usual; the fact that no relapses occurred at these times is taken to show that the good results were due to the medicine, and not to the diet. The second case was somewhat less fortunate, not being entirely cured. The disease was, however, undoubtedly kept from advancing. The urine became normal in quantity, and soon contained very little sugar; sugar often disappeared from the urine for longer or shorter intervals, but always returned in small quantities. The progress of the case was considered very satisfactory. No marked gastric disturbance was caused by the treatment in either case; it was not necessary at any time to suspend the administration of the ergot on account of unpleasant symptoms attributable to it. [The author does not appear to dread the "*gangrène d'emblée*" which Trousseau mentioned as likely to occur during the prolonged administration of ergot, even in small doses, and on which most French authors lay such stress.]

29. *Hyoscyamia*, a crystalline alkaloid, is odorless, bitter, and quite insoluble in cold water; it is easily soluble in hot water, alcohol, ether, and chloroform. The best preparation is that of Merck, and it is efficient in the dose of one thirtieth of a grain; one quarter of a grain could not be given without great danger. It possesses the hypnotic, anodyne, and antispasmodic properties of hyoscyamus, and from its small bulk may be given in coffee, etc.—a great convenience in cases of mania, where patients refuse medicine. In the author's opinion, it is especially efficacious in the treatment of mania, delirium tremens, and paralysis agitans; and is particularly to be preferred when the depressing effects of the bromides upon the heart and respiration are feared. Short histories are given of three cases of puerperal mania and one of delirium tremens successfully treated with hyoscyamia; also of one case of paralysis agitans where its administration was attended with benefit. The dose of one thirtieth of a grain was repeated every hour or two until slight mydriasis and dryness of the mouth were produced.

31. In his remarks on *salicylate of sodium in typhoid fever and erysipelas*, the author states that he gives the drug, in typhoid fever, alternately with quinine, for its antipyretic effect; he considers two grammes [ʒ ss.] an effective antipyretic dose. He is pleased with the treatment after having employed it in twenty-nine cases, with only three deaths; but he considers that it somewhat increases the tendency to intestinal hæmorrhages and pulmonary complications. In erysipelas he administers it internally, in doses of four grammes [ʒj]; and also uses it externally, in the form of compresses wrung out of a one-to-twenty solution, believing that it is to a great extent absorbed by the skin. In all the cases of erysipelas so treated by him, the temperature has fallen to the normal standard in forty-eight hours at the most, often in less time.

34. The author has used *salicylate of calcium in the serous diarrhœa of infants* in private practice in twenty-seven cases, using that drug only. In all, the disease was promptly and permanently controlled. The indications for the treatment seemed to be pretty well defined. Whenever the *dejecta* were distinctly of a serous character, whether the flux was more or less profuse, the tendency being to *cholera infantum* and collapse, the calcium salicylate promptly checked the frequency of the movements, and ultimately controlled them. The success was greater than any the author had ever experienced with other remedies in this class of cases. The patients ranged in age from two months to two and a half years. No discrimination was made as to diet, which, in some cases, was breast-milk exclusively, in others, condensed milk, the patent foods, or a mixed diet. In no case was there any modification of the preceding diet, except as to quantity. All the patients were in good social and hygienic surroundings. The dose was always from three to five grains every two, or every four, hours; from six to eighteen doses were necessary in the different cases. In a few cases small doses of aconite and veratrum viride were given during the continuance of high temperature. It was noted that the medicine seemed to have no influence in changing the secretions so as to modify the character of the evacuations; the discharges would be under control for a period varying from two to twelve hours, and the next movement would be a watery one, but there would be no further diarrhœa. Without exception, the stomach tolerated the drug; vomiting ceased simultaneously with the diarrhœa. The serous diarrhœas alone seemed amenable: other forms, lienteric or inflammatory, required additional treatment. The best forms of prescription are: ℞ Acid. salicylic. gr. xxx, cretæ præcip. gr. x, syrup. f ʒ ij, aquæ ʒ xiv. S. Two teaspoonfuls every two to four hours. —℞ Acid. salicylic. gr. xxij, cretæ præparat. gr. viij. Div. in chart. No. vj (sing. gr. v), vel chart. No. x (sing. gr. iij). S. One every two, or every four, hours. It will be observed that in both these formulæ the calcium salicylate is the result of a reaction taking place in the mixture. and attended with effervescence due to the setting free of carbonic-acid gas from the chalk.

37. The author reports his results with *carbolic acid as an antipyretic* in eight cases of febrile disease; these were five of typhoid fever, one of small-pox, one of tubercular phthisis, and one of puerperal metro-peritonitis. After some experimentation, the rectum was chosen as the best avenue by which to administer the medicine; one hundred to one hundred and fifty grammes [℥ iij–℥ ivss.] of water were injected, containing in solution from twenty-five to seventy-five centigrammes [gr. iv–gr. xij] of carbolic acid. Laudanum may be added to these enemata, if desirable. The frequency of the injections may be regulated with the thermometer; or, where that is difficult, they may be ordered every three hours. The author has also used a continuous rectal douche—the carbolized solution being conveyed to the part by means of a syphon, and allowed to flow away through a cannula left *in situ*. He prefers the latter method. The doses are larger than have hitherto been considered safe. Many of the patients mentioned in the article took by injection from five to twelve grammes [75 grains—ʒ iij] of carbolic acid daily; one even received nineteen grammes [285 gr.] in twenty-four hours. One patient with typhoid fever took by the rectum ninety-one grammes [1,365 gr.] of carbolic acid from the 2d of August up to the 7th, without experiencing other symptoms than profuse sweats, some intoxication, and the desired reduction of temperature. The author considers that more than two grammes [ʒ ss.] is a large single dose. The conclusion is, that carbolic acid in sufficient quantity, its administration being repeated, is an infallible antipyretic, no matter what may be the cause of the high temperature. Doses hitherto considered dangerous may be given with impunity. The duration of the disease (typhoid fever, etc.) is not modified; the effect is purely and simply upon the temperature.

39. This new antiseptic and antineuralgic is stearoptene of peppermint-oil, or *menthol*, a crystalline solid derived from the oil of the mentha piperita. It is not soluble in water, but dissolves readily in alcohol, ether, or glycerine. A one-to-twenty solution may be obtained by adding one grain of menthol to six minims of alcohol with fourteen minims of water. Its antiseptic action resembles that of thymol; in the strength of one to five hundred, it will prevent the development of bacteria and kill those already in existence. Its antineuralgic action is obtained by painting it in solution (one grain of menthol in ten minims of alcohol) over the painful point. The author considers that menthol is the active antiseptic and antineuralgic principle of oil of peppermint.

41. M. Bouchut presented for consideration his experiments on *vegetable pepsins*, showing samples of *papaine*, from the *carica papaya*, and of *ficoin*, extracted from the *ficus*. He stated that many plants contained juices from which vegetable pepsins might be extracted and used in medicine. A solution of ten centigrammes [gr. jss.] of papaine in thirty grammes [ʒ vijss.] of water, would digest and convert into assimilable peptone fifteen grammes [225 gr.] of fibrine. From this experiment the author concluded that papaine might be employed in digestive troubles, instead of animal pepsin, which is so often unreliable and even inert. He also mentioned experiments in progress, testing the power of papaine to dissolve tumors of various types when injected into their substance with a Pravaz's syringe. In the discussion, M. Catillon called attention to the fact that the time required for artificial digestions was an important matter bearing upon their therapeutic applicability. He did not question the investigations of M. Bouchut, but had often been disappointed in experiments which he himself had made in the same direction, employing such extracts of the *carica papaya* as he had been able to procure in the shops; he had often found these preparations altogether inert. Moreover, it was not enough to show that a solution of papaine would digest fibrine; it was necessary also to know whether it would dissolve cooked albumen as well, this last being the true test of the efficacy of digestive ferments. If this last process should require a month for its completion—or, in fact, any time longer than two or three hours—it would be evident that no therapeutic use could be made of papaine, however interesting its digestive properties might be from a chemical point of view.

44. This is a report of the results in seven cases of *trigeminal neuralgia treated with the ammoniacal sulphate of copper*. Five of the cases are quoted from a communication by M. Féréol. In three of these, other remedies had already been used in vain; in the two others, the drug in question was given at the commencement of the attack. In the two cases reported by the author, the copper salt was given at once. The duration of the disease, before treatment, varied in the different cases from a day to eighteen months; improvement was generally experienced within twenty-four hours, and a complete cure was effected within ten days at the most. The amount employed was from ten to sixty centigrammes [gr. jss.–gr. x] in twenty-four hours, dissolved in water and syrup. Large doses may cause slight vomiting or diarrhœa; in sensitive patients it may be administered by the rectum.

46. In this paper on *pilocarpin in diabetes mellitus*, the author states that an ordinary case of that disease came under his charge in January, 1880; at that time the patient's weight was fifty-four and a half kilogrammes [120 lbs.]. During ten days no medicine was given; antidiabetic diet was prescribed, but the amount of drink was not restricted. The average ingestion of fluid was from 5,000 to 6,100 cubic centimetres [℥ 166 – ℥ 203]—the amount of urine voided varied from 6,000 to 9,700 cubic centimetres [℥ 200– ℥ 323], and contained from 480 to 786 grammes [℥ xv– ℥ xxiv] of sugar. Treatment was then begun. A hypodermic injection containing two centigrammes [gr. $\frac{1}{3}$] of the muriate of pilocarpin was administered every few days—eleven injections in all, at irregular intervals, from the last of January, when the first was given, until the 20th of March, when he left the hospital. The pilocarpin produced profuse sweating and salivation on each occasion; no sugar was ever found in the sweat or in the saliva. At the time of his discharge the patient had gained about three pounds in weight, and during his last twenty-four hours in the hospital he passed only 3,800 cubic centimetres [℥ 126] of urine, containing 224 grammes [℥ vij] of sugar. The amount of fluid injected during this last period of twenty-four hours is not specified, but the patient, as before, was not restricted in the matter. [The author reports only this case, but is enthusiastic and anxious to make further experiments. He offers no explanation of the mode of action of pilocarpin in this affection. It will be observed that the diminution in the urine was not a mere immediate result of the sweating caused by the pilocarpin, but persisted for a considerable period.]

48. The author describes *the expectorant action of the crystalline chloride of apomorphia* in fifty-five cases of bronchitis, two of catarrhal pneumonia, and one of spasmodic laryngitis, or false croup. In the cases ot bronchitis and that of laryngitis, the remedy seemed to cause abatement of the intensity of the invasion, and to render the exudation less viscid and tenacious, thereby facilitating its expectoration. The duration of the attacks was shortened, urgent dyspnœa was avoided, and the patients progressed more rapidly and comfortably to convalescence. In the cases of catarrhal pneumonia, the associated bronchitis was favorably affected, and resolution progressed more rapidly. The dosage employed is as follows: For children under one year, one milligramme [gr. $\frac{1}{66}$]. Beyond this, add one-half milligramme [gr. $\frac{1}{132}$] for every year, up to eleven years of age. Beyond this, add one milligramme [gr. $\frac{1}{66}$] for every year until adult age is reached. According to this, a child of seven years would receive four milligrammes [gr. $\frac{1}{16}$] at a dose; a child of fifteen would require one centigramme [gr. $\frac{1}{6}$]. In special cases, from idiosyncrasy, it may prove necessary to give more or less than this.

49. This is a short report of fifty-one cases of *acute gastro-enteritis in nursing infants, treated with the benzoate of sodium.* The remedy does not directly control the frequency or alter the quality of the evacuations, but acts as an antiferment, stops the vomiting, and gradually quells the disturbance so that the child may rest and take nourishment. Careful feeding is an important part of the author's treatment; he is in favor of thin gruels prepared with oats, barley, etc. If fever be present, it should be controlled with cold baths, and alcoholic stimulants are to be given if required. The doses employed, and the method of administration preferred, are not mentioned. A mortality is recorded of nineteen and six tenths per centum.

51. In this paper on *frictions with green soap in the treatment of strumous enlargement of the glands in children*, it is considered that the glandular enlargements and similar affections to which scrofulous patients are subject are due to lymph congestions in the lymphatic vessels or glands; and that the accumulations of cells so produced manifest a deficient vitality and a marked tendency to undergo caseous degeneration. Later on, these cheesy concretions are apt to suppurate and form sluggish sores. To avoid these sores, the formation of cheesy nodules should be prevented in the first place. Inunctions of sapo viridis accomplish this object in a manner which the author does not attempt to explain, but describes as very striking. He asserts that no other treatment will so rapidly and effectively dispel the glandular enlargements of scrofula. It is directed that a teaspoonful be thoroughly rubbed over one cutaneous area in the evening, being washed away in the morning; the next evening, another part of the surface may be selected, and so on until the recovery of the skin at the site of the first application permits a return to it. The author has cured four cases of eczema, glandular enlargement, and chronic coryza by this method; the slowest recovery did not require a week.

52. In this paper on *bromide of ethyl in hysteria and epilepsy*, the author states that its administration, on numerous occasions, to five hysterical patients almost invariably brought the paroxysms to a rapid termination. Given during epileptic paroxysms, it has in some cases produced muscular relaxation, in others has diminished the violence of the attacks, and in others has been without apparent effect. A daily inhalation administered to ten epileptics, five of whom were adults and five children, carried to the point of anæsthesia, and in some cases continued for twenty minutes, has seemed in about half of the cases to diminish the tendency to the occurrence of the paroxysms. In the course of five hundred administrations carried to anæsthesia, the number of patients being ten, no disturbance was observed beyond a trifling acceleration of the pulse and respiration, and a tendency in two of the patients to slight rigidity and muscular tremors. The general nutrition of those under treatment did not suffer.

57. Three cases of *sudden death after the administration of small quantities of chloroform* are reported. The heart stopped suddenly and without apparent cause, respiration continuing for a short time afterward; in spite of all efforts at stimulation, the heart could not be made to act again. The main interest in these cases attaches to facts developed during post-mortem examination, which was in all of them conducted by Professor von Recklinghausen, who decided that the cause of death in all the cases was the presence of "bubbles of gas in the larger nerve trunks and the heart." It is particularly stated that the condition of things could not be attributed to decomposition, since the autopsies were made before that process had begun. It is also explained that the cases were not instances of entrance of air into the veins, the "gas in the nerve trunks" being air which had come from the heart, and situated merely *in the blood-vessels which supplied the nerve trunks*. On the contrary, it is advanced, as a probable explanation, that the gas in question was nitrogen set free by the chloroform vapor permeating the body. In the discussion, von Langenbeck mentioned three similar cases of death from chloroform, in which, at the autopsy, gas was found in the veins and in the right side of the heart. [The manner in which the chloroform sets the nitrogen free—why this unfortunate process occurs in some cases and not in others—seems, from the tenor of the article, about to be explained when the meeting is adjourned and the discussion closes.]

65. Mills's case of *quassia poisoning* was that of a child four years of age, suffering from thread-worms, that was given a rectal injection of six ounces of infusion of quassia, which was nearly all retained. An hour and a half afterward the child developed alarming symptoms. It became ghastly pale; the lips were bloodless, the head thrown back, the surface cold, the eyes closed, and the pupils contracted, with no reaction to light. The respiration was feeble, inaudible; the pulse was not to be felt, and there was complete unconsciousness. Stimulants, hot foot-baths, and finally an enema containing half a drachm of ether, one drachm of aromatic spirit of ammonia, and half an ounce of brandy, diluted with warm water, was administered. At the end of three hours consciousness was restored, and the symptoms disappeared; the quassia did not act as a purgative. On inquiry, it was discovered that the dispenser had by mistake given the concentrated infusion of quassia (exact strength not stated) instead of the simple infusion.

66. In this case of *santonin poisoning*, a dose of six grains of the drug was given by mistake to a child of five years. The medicine was taken upon an empty stomach, and the child almost immediately complained of pain in the epigastrium; in a minute or two convulsions came on, and insensibility soon followed. The convulsive movements were continuous, not intermittent, and not very severe; near the end there was slight opisthotonos. There was no purging or vomiting; death occurred about thirty-five minutes after the powder was swallowed. Post-mortem examination disclosed nothing beyond slight inflammation of the stomach and duodenum. Strychnia was suspected [a case is on record somewhere of strychnia occurring in commercial santonin], but was not found; chemical examination disclosed nothing but santonin. The author continues by entering somewhat fully into the chemistry of santonin; among other things, he calls attention to the facts that the crystals are originally white, but turn yellow on exposure to light, and that this change in color is attended with a loss of strength—the white santonin is, therefore, stronger than the yellow. The urine of one who has taken santonin is greenish-yellow, and turns crimson on the addition of an alkali (potash). The color is intensified by heat.

QUARTERLY REPORT ON VENEREAL AND GENITO-URINARY DISEASES.

No. IV.

By EDWARD B. BRONSON, M. D.,

PHYSICIAN FOR SKIN AND VENEREAL DISEASES TO THE NEW YORK DISPENSARY.

1. Bergh, R.—Beretning fra Almindelig Hospitals, 2den Afdeling, for veneriske—og Hudsygdomine, for 1879. "Hospitals-Tidende," July 21, 28, Aug. 4, 11, 1880.
2. De Luca, R.—Contribuzione alla patologia e alla clinica del catarro venereo nella donna. "Giorn. Internaz. delle Sci. Med.," ii, 2, 4, 1880.
3. Gamir, J.—Algunos casos de blenorragia aguda tratados con buen resultado por el clorato potásico al interior. "Gac. de Sanidad Militar," Sept. 25, 1880.

4. Dawosky.—Ein seltener Fall von Hypospadie mit virulentem Harnröhrenkatarrh. "Dtsch. med. Woch.," Oct. 16, 1880.
5. Stieman, W. F.—Case of phlegmonous inflammation, excited by gonorrhœa, resulting in death. "Am. Pract.," Sept., 1880.
6. Heller.—Epidemische Orchitis. "Berl. klin. Woch.," Sept. 20, 1880.
7. Terrillon.—Des altérations du sperme dans l'épididymite blennorrhagique. "Ann. de Dermat. et de Syphil.," July, 1880.
8. Scarenzio, A.—Sulle artropatie riflesse da uretrite. "Giorn. Ital. delle Mal. Ven. e della Pelle," Aug., 1880.
9. Gross, S. W.—On sexual debility, sexual exhaustion, and impotence. "Med. News and Abstr.," Sept., 1880.
10. Johnson, J. T.—Some disorders of the genito-urinary organs, often misnamed spermatorrhœa. "Trans. of the Med. Assoc. of Georgia," 1880.
11. Michael, J. E.—Close amputation of the penis, and formation of a perineal opening for urination. "Maryland Med. Jour.," April, 1880.
12. Desmaroux.—Enchondro-sarcome du testicule. "Gaz. des Hôp.," Sept. 28, 1880.
13. Horteloup.—Note sur le chancre simple et sur l'adénite chancreuse. "Ann. de Dermat. et de Syphil.," Jan., 1880.
14. Hyde, J. N.—On chancre of the meatus and urethra in the male. "Chicago Med. Jour. and Exam.," Aug., 1880.
15. Chadzynski, J.—Sur la valeur prophylactique de l'excision de la sclérose syphilitique initiale. "Ann. de Dermat. et de Syphil.," July, 1880.
16. Mauriac, C.—Leçon sur les troubles constitutionnels qui se manifestent pendant la période prodromique de la syphilis. "Lyon Méd.," Aug. 1, 8, 22, 1880.
17. Vajda.—Kann die während der Schwangerschaft acquirirte Syphilis der Mutter auf das Kind (in utero) übertragen werden? "Wien. med. Woch.," July 24, 31, Aug. 7, 1880.
18. Grossmann, J.—Syphilis hereditaria tarda. "Med.-chir. Centr.-Bl.," Aug. 29, Sept. 3, 1880.
19. Mauriac, C.—Mémoire sur les affections syphilitiques précoces du tissu cellulaire sous-cutané. "Ann. de Dermat. et de Syphil.," July, 1880.
20. Fox, G. H.—A clinical lecture on the diagnosis of cutaneous syphilis. "N. Y. Med. Jour.," Oct., 1880.
21. Diday, P.—Dartres syphilitiques, ou syphilis et dartre. "Lyon Méd.," Aug. 15, 1880.
22. Diday, P.—La syphilis automnale de 1879. "Ann. de Dermat. et de Syphil.," Jan., 1880.
23. Ott, E.—Syphilis galopante. [Hôp. St. Louis.] "Union Méd.," Oct. 16, 1880.
24. Martineau.—Leçons sur la thérapeutique de la syphilis. "Union Méd.," Sept. 16, 18, 25, Oct. 2, 9, 1880.
25. Wood, H. C.—Contribution to our knowledge of nervous syphilis. "Am. Jour. of the Med. Sci.," Oct., 1880.
26. Drysdale, C. R.—Syphilitic insanity. "Med. Press and Circular," Sept. 15, 1880.
27. Fournier, A.—De l'épilepsie syphilitique secondaire. "Ann. de Dermat. et de Syphil.," Jan., April, 1880.
28. Frank, J.—Ueber Lungensyphilis. "Wien. med. Presse," Sept. 19, 1880.
29. Gamberini, P.—La sifilide polmonare. "Giorn. Internaz. delle Sci. Med.," ii, 5, 1880.

30. Richet.—Tumeur gommeuse du triceps fémoral. "Gaz. des Hôp.," Sept. 28, 1880.
31. Viforcos, R.—Glosopatías gomosas. Breve reseña sobre las mismas á proposito de un caso de glositis gomosa precoz. "Revista Espec. de Oftal., Sifil., Dermat., y Afecc. Urin.," Aug., 1880.
32. Mracek, F.—Zur Kenntniss der Dactylitis syphilitica. "Wien. med. Presse," Sept. 12, 1880.
33. Thompson, Sir H.—Remarks on progress in the treatment of stricture of the urethra. "Brit. Med. Jour.," Aug. 28, 1880.
34. Ranney, A. L.—The treatment of urethral stricture by the "perineal section." "Chicago Med. Jour. and Exam.," Oct., 1880.
35. Armstrong, W. S.—A report of forty-two cases of uncomplicated stricture of the urethra, and some remarks upon the treatment, etc. "Trans. of the Med. Assoc. of Georgia," 1880.
36. Thompson, Sir H.—On lithotrity at a single sitting, with a record of its results in forty-six consecutive cases. [Brit. Med. Assoc.] "Brit. Med. Jour.," Aug. 28, 1880.
37. Suender.—La litolapaxia, ó litotricia rápida del Dr. Bigelow. "Revista Espec. de Oftal., Sifil., Dermat., y Afecc. Urin.," June, 1880.
38. Wertheim, G.—Behandlung des chronischen Blasenkatarrhs. "Wien. med. Woch.," June 12, 1880.
39. Castellana, N.—La riforma della cistotomia prostatica. "Giorn. Internaz. delle Sci. Med.," ii, 4, 1880.
40. Ainsworth, F. C.—A case of hydatids of the bladder. "Med. Record," Sept. 25, 1880.

6. Heller reports *an epidemic of orchitis* that occurred in 1876, in a garrison at Danzig. The force comprised 2,200 men. From January 10th to the end of April there were twenty-nine cases of orchitis. None of these appear to have been of venereal origin. Three were due to injury, eight occurred after mumps, and two at the same time with the latter affection. The cases were too widely separated from each other to be the result of contagion. The symptoms consisted of pain, swelling (seldom to more than twice the natural size), and fever. The consistence of the organ was not altered; there was tenderness on pressure; the skin of the scrotum was unaltered and not sensitive. The epididymis was generally normal; rarely, slightly indurated. The fever and pain varied in different cases. In ten, the rise of temperature was quite marked; in four, over 40° C. [104° F.]. The fever was high in proportion to the local inflammation, and the amount of pain was not commensurate with the degree of swelling. Both the pain and the fever were over in four or five days, and in four or five more the swelling subsided. The writer had the opportunity of examining ten of the patients at the end of the same year. In five there was moderate atrophy of the testicle that had been affected, and it was reduced about one half in size.

13. Horteloup makes some interesting observations concerning *chancres and buboes.* In discussing the numerical relation of chancres to chancroids, he remarks that formerly the latter were supposed to greatly outnumber the former; but he points out the fact that before Bassereau clearly differentiated the two varieties, statistics were unreliable. In 1865, in the *Hôpital du Midi*, there were three "simple chancres" (chancroids) to two "syphilitic chancres." During the siege of Paris, the reign of the Commune, and the year following, the number of soft chancres was considerably increased. In 1873, and especially in 1874, there was a marked change again, and the soft chancre became almost exceptional. So great had been the decrease in ten years (from 1864 to 1874) that Mauriac, in an essay "*De la rareté actuelle du chancre simple,*" had argued that the soft chancre was in process of extinction. But, following this period, there was another increase. In 1879 it was very marked. From January to October of that year there were observed in the *Hôpital du Midi*, 749 soft chancres, against 331 in the corresponding period of the year previous. To show that merely local causes would not account for this, the writer refers to a report of M. Horand, of Lyons, which indicates a parallel increase in that city.═══ Horteloup also discusses the *relation of the simple, or sympathetic, to the virulent, or chancroidal, bubo.* In one case there is a simple inflammatory adenitis; in the other, an adenitis due to the direct conveyance of chancroidal pus to the glands. Recent statistics would indicate that the simple bubo is much more common than the chancroidal. The writer maintains that many suppurating buboes which are set down as simple are in reality chancroidal. It is impossible, he claims, to judge by its appearance alone whether a bubo is chancroidal or not. It is only by auto-inoculation that the point can be positively settled. By this means a bubo will sometimes be found to be chancrous when nothing in its appearance would have suggested it. The writer speaks of the great variation of buboes in the time of their appearance. In some cases the adenitis will develop in fifteen days; in others at the end of a month or six weeks; in others still not until the chancre is almost or entirely healed. M. Puche reported a virulent bubo as occurring only after several years of the existence of a phagedenic chancre. Referring to the observation of Ricord, that when the chancroidal virus is diluted to a certain extent with other fluids it ceases to be inoculable, the writer suggests that the virus may, by setting up a copious suppuration in the lymphatic gland, be so diluted as to become incapable of infecting the surrounding walls, and for a long time, therefore, remain dormant. A case is cited of a patient with chancroidal bubo, which was incised in March. The patient left the hospital a month later, with both chancre and bubo healed. In July he returned with pain in the groin, but, at first, without any swelling. Soon a bubo formed, which was opened in November, and the pus was found auto-inoculable. One portion of the bubo became phagedenic, with undermined edges. The writer claims that he has often noted a bubo of which the only discoverable cause was a chancre which had healed months before and had been quite forgotten.

16. Mauriac describes *the earliest constitutional manifestations of syphilis*, under the name of "prodromal symptoms." They occur just at the termination of the second period of incubation. Previous to this, he maintains, no constitutional symptoms exist. Symptoms which some writers have described as occurring even during the first incubation, indicating, as they believed, a general infection before the development of the chancre, are regarded by Mauriac as purely imaginary. Moreover, the writer is disposed to differ with those who think that by means of anti-syphilitic treatment during the second period of incubation, they can affect the duration of this period or modify the severity of the subsequent symptoms. The only circumstances, according to Mauriac, which may affect the duration of this period are season or climate and intercurrent diseases. He refers to the general fact (often stated) that syphilis is slower in developing in cold than in hot climates, and, as being in harmony with this rule, states that during the last winter, which was an unusually severe one in France, the period of incubation of syphilis was very commonly prolonged beyond its usual limits—often to sixty or seventy days. [In connection with this statement, we would refer to Diday's article (No. 22 in our bibliography), entitled "*La syphilis automnale de* 1879." The latter writer's observations do not exactly harmonize with those of Mauriac. Diday considered the syphilis of the autumn of 1879 as unusually severe in consequence of the long-continued low temperature of that season. He observes that persons who by their pursuits are exposed to cold and damp, such as workers in tunnels and drains, suffer from a particularly severe and inveterate form of syphilis. Corresponding to this, syphilis during the cold season referred to was unusually severe. The manifestations of the disease occurred at shorter intervals, he claims, than common, and there were frequently relapses after periods which would ordinarily be considered as sufficient to guarantee that the patients were cured. It is a little difficult to reconcile these two statements. The fact probably is, that cold weather tends to retard the development of syphilis unless the subject be exposed in such a way as to suffer from its depressing effects, which would naturally aggravate the disease, as do other depressing influences.] Mauriac does not agree with the opinion held by many writers, that the duration of the period of incubation can be prolonged, or the character of the subsequent symptoms be modified, by early anti-syphilitic treatment. Such an opinion, he thinks, is based upon very insufficient evidence. Syphilitic fever (an important prodromal symptom) is regarded by the writer as less common than is generally supposed. In his own experience, it has been rather exceptional. It is "vastly more common in women than in men." In women, according to Courteaux, it occurs also in the secondary stage in the proportion of one to three, but in men its manifestation is confined to the prodromal period, occurring just as the infection is becoming general. The writer follows Courteaux in the division of the fever into intermittent and remittent types. In some cases, he states, there is an amount of nervous agitation at the outset that would suggest pernicious intermittent. In one case there was terrible headache, with delirium, combined with neuralgic pains in the right arm and paresis of the part. The nature of the affection was unsuspected at first, but suddenly a confluent roseola syphilitica made its appearance, when the nervous symptoms at once disappeared. The writer does not regard the fever as symptomatic of any local disturbance, but as implying a reaction of the whole economy against the invasion of the virulent principle—an effort on the part of Nature to be rid of the morbific material. For the treatment of this phase of the disease, the writer prefers the iodide of potassium to mercury. He claims that it has a more sedative effect. Other prodromal symptoms are the various pains pertaining to the early stage of the disease; symptoms due to disturbances of the sympathetic and general nervous systems, and to alterations in the composition of the blood; and cardio-pulmonary symptoms, such as palpitations, dyspnœa, and precordial pains. A peculiar symptom is referred to, which consists of a distress in respiration, attended with a feeling of painful constriction of the thoracic wall in the precordial region. It is relieved temporarily by a full respiration, but soon returns.

17. The question: *Can syphilis of the mother acquired during pregnancy be transmitted to the fœtus?* is argued by Vajda in the affirmative. The argument consists of criticism of the statistics adduced by those who have maintained the negative, the presentation of rebutting statistics, and, finally, of some *a priori* reasoning. To Bärensprung's fourteen cases he makes the objection that they were either not carefully enough observed or not sufficiently long under observation. Kassowitz, who maintained that the syphilitic virus could not traverse "the barriers which divide the maternal from the fœtal circulations in the direction from mother to fœtus," cited six cases in support of his proposition. Vajda claims to have had peculiar facilities for examining four of these patients, together with their records, inasmuch as he was acting as clinical assistant in the institution where the cases were observed. In one of these cases, he asserts, the mother was never shown to be syphilitic. In another, he declares, the child, which, according to Kassowitz's account, was under

observation for three months without any symptoms of syphilis appearing, died at the age of two months of "unknown cause"; and, moreover, the mother was syphilitic before conception. Four cases are cited by Vajda in support of the affirmative of the question. One of these cases was observed by himself, but it is not entirely conclusive, from the fact that decided symptoms of syphilis did not appear in the child till seven weeks after birth. But the writer claims that it must have been congenital, because there was no initial lesion, nor were the lymphatic glands enlarged, as they would have been in acquired syphilis. Furthermore, the presence of coryza was considered as evidence that the disease was inherited. In other respects the history seemed to clearly support the writer's conclusion. [A better case was reported by Hudson in the "American Practitioner" for March, which was noticed in our Quarterly Report in the June number of this "JOURNAL."] Among the general considerations which have a bearing upon the subject, the writer refers to the generally admitted fact of the preponderating influence of the mother in hereditary syphilis, and thinks it is best explained on the supposition that the mother can convey the disease to her offspring, not only through an infected ovum, but through the utero-placental circulation, which would seem, in the mother's case, to redouble the chances of transmission.

21. Diday, in a short article on *syphilis and the dartres*, touches upon a very interesting topic suggested by a recent thesis by Dr. Revillet, entitled "*Contribution à l'étude de la syphilis chez les dartreux.*" This paper we have not seen, but we infer from the comments of M. Diday that it treats mainly of the influence of syphilis upon psoriasis, and *vice versâ*, holding that they *do* modify each other. That is, we suppose, a given eruption may be compounded of psoriasis and syphilis—the resultant, in other words, of two pathological actions. Diday makes no attempt to criticise the author's conclusions directly, but shifts the field of inquiry to the consideration of eczema and syphilis. He thinks that the subject may be studied better by taking a disease which is totally dissimilar to syphilis, as eczema is. Psoriasis, on the other hand, presents too many points of resemblance to syphilis, he claims, both in a certain degree of similarity in the eruptions and in the fact that both are more or less amenable to anti-syphilitic treatment, for which fact Donovan, Rochard, Gubler, and Lailler are referred to as authorities. Taking eczema, then, as a type for comparison, he proceeds to give his own experience bearing upon the point at issue. He refers to numerous cases where he has seen eczema associated with syphilides, sometimes in close contiguity, but never has he seen the lesion of eczema become a focus or point of departure for a lesion of syphilis. The two eruptions always pursued each its own course, entirely independent of one another; each responding to its appropriate treatment, while the other remained unaffected. The question now is asked, Why should not a lesion of eczema provoke the eruption of a syphilide, in like manner as a traumatic lesion, such as a scratch, a contusion, or a burn, the power of which to determine the local development of a syphilitic eruption can not be questioned? The writer's explanation seems to rest on the hypothesis that two pathological processes can not coexist at the same point. The eczema is the expression of a diathesis, and, like the syphilide, may be provoked by an external irritation; but, whatever its occasioning cause, so soon as this cause has called into play one form of activity, the part affected is precluded from entertaining a pathological process proceeding from another diathesis. The eczema, which is itself the result of a pathological action, can not become the exciting cause of another similar action. Or, to use the writer's own words: "*C'est outrer, n'est-ce même pas intervertir les rôles, que d'attribuer au résultat d'un nisus pathogénique le pouvoir de devenir la cause d'un nisus* *semblable?* *Quand*," he continues, "*spontanément développé ou sollicité par une irritation locale, le mouvement fluxionnaire herpétogène a abouti, quand il a, par exemple, suscité en un point l'apparition d'une plaque eczémateuse, il est satisfait, comme disaient nos anciens; il ne demande, il ne peut, là, rien de plus.*" [It is of course essential to this argument to admit that eczema is a diathetic disease, as well as that the facts concerning the connection of eczema and syphilis, as stated by Diday, can be substantiated. While we fully agree with the writer that eczema, so far, at least, as our observation goes, is never the exciting cause of a syphilitic lesion, we are not prepared to admit that they never coexist. Eczema may occur as an intercurrent affection with various cutaneous diseases, and we think many can recall syphilitic lesions which, usually in consequence of irritating treatment or of irritating discharges, have become complicated with eczema, so as partially to mask the features of the original disease. It may be, however, that the eczema does not attack the identical places where the syphilitic action is in play.]

22. [See remarks under No. 16.]

24. In his lectures on the *treatment of syphilis*, Martineau does not approve of giving mercury before the secondary symptoms appear, believing that it can have no beneficial effect upon the disease at that period, and, moreover, that, by administering it so early, the system becomes saturated with it, and is less susceptible to its influence when its effect is most needed. Martineau's plan of treatment is similar to that of Fournier, but differs from the latter in that the use of iodide of potassium is begun earlier, and sulphur waters are added to the course. The following is his scheme: *For the first year*, three to four months, mercury; three to four months, iodide of potassium; two months, mercury; two months, iodide of potassium. *For the second year*, one month, mercury; two months, iodide of potassium; two months, no treatment; one month, mercury; three months, iodide of potassium; three months, no treatment. *For the third year*, one month, mercury; two months, iodide of potassium; three months, no treatment; one month, mercury; two months, iodide of potassium; three months, sulphur waters. By this plan, it is claimed, the mercury is never given so continuously as to cause saturation and so lose its effect, and the iodide of potassium during the intervals assists in its elimination. He uses mercury internally in the form of the mercurial ointment made into a pill with soap and powdered liquorice. The sulphur waters he uses both as baths and as a drink. The waters of Luchon, in Haute Garonne, and of Aix, in Savoy, are particularly recommended. [There is certainly something to be said in favor of a systematic treatment of syphilis, and, if all syphilitic patients were to be subjected to one routine course of treatment (to which we would demur), perhaps there are as few objections to Martineau's plan as to any. What the special object is in prescribing the sulphur waters we are unable to see.]

27. Fournier describes *a syphilitic epilepsy peculiar to the secondary stage* of syphilis, and enumerates the marks which distinguish it from the form that occurs in the tertiary stage. He gives a few illustrative cases of this affection, and states that he has notes of a dozen in all. The epilepsy was associated in every instance with well-marked symptoms of recent syphilis; came on suddenly without antecedent cause, other than the syphilis; and disappeared rapidly, with the other symptoms, under anti-syphilitic treatment. In its general character it closely resembled an attack of "*haut mal.*" It was frequently accompanied by other symptoms of a neurotic character, especially the hysterical. The secondary epilepsy may be distinguished from the tertiary, not only by the time of its appearance, but by a difference in the character of their symptoms. The tertiary affection is more apt to take the form of "*petit mal,*" with the vertigo, absence of mind, sudden spasms, attacks of trembling, sudden and irresistible impulses which characterize this affection. On the other hand, the secondary form is marked by the complete loss of consciousness and the decided convulsive character peculiar to the typical fit. Moreover, in tertiary epilepsy, there are superadded the various symptoms of a specific lesion of the brain—all the symptoms conforming to this and marking its gradual progress. Finally, symptoms develop which never occur in the secondary form, such as evidences of congestion, intellectual disturbances, motor troubles, and the like. That form of epilepsy which has been described by Fournier under the name of "*épilepsie consciente*" never occurs in the secondary stage. It is the writer's opinion that secondary epilepsy is purely a neurosis, and not the expression of any central lesion.

33. Sir Henry Thompson, in opening the discussion on *stricture of the urethra*, at the annual meeting of the British Medical Association lately held at Cambridge, began by recalling the fact that it was thirty years since he began an essay on stricture, for which the Jacksonian prize of the Royal College of Surgeons was awarded the following year. He then proceeded to review the more important events which, since then, had marked the progress in this special department of medicine, of which he might with truth have said, "*pars magna fui.*" The questions which most occupied the attention of surgeons at the period above mentioned were, the value of caustic applications in the treatment of stricture and of the operation of external urethrotomy for narrow, though not impassable, strictures, which consisted in a "median incision carried through all the structures of the perinæum, and involving the whole of the narrowed urethra"—the operation of Professor Syme, of Edinburgh. Both these modes of treatment, he observes, have almost entirely disappeared. He believes that the advance has been real since this period, though "not always," as he expresses it, "in a right line, but rather in that of an advancing pendulum." The most important steps of this advance are classified under five heads, as follows: "1. A general recognition of the principle that a delicate and gentle manipulation of any instrument in the urethra is alone trustworthy or permissible, in the place of that which was formerly quite prevalent, viz., that an urethral obstruction might often be overcome mainly by force. 2. The substitution of very pliable and taper instruments for silver and stiff gum-elastic instruments in much of the treatment, both in ordinary and in continuous dilatation. 3. A more general acceptation of the doctrine that—given time, patience, and gentle handling—very few strictures should be met with which can not be fairly and successfully traversed by an instrument passed through them into the bladder. At the same time an undoubted improvement is to be noted in the mode of operating for those exceptional cases in which the surgeon fails to accomplish that object. 4. A more general acceptance of the doctrine that dilatation of the urethra, whether with or without incision, may be carried with advantage to a somewhat higher degree than had for some time previously been regarded as desirable. 5. The substitution of internal urethrotomy, in some form, for the application of caustics and for external urethrotomy on a guide." In the course of his remarks on these topics, he refers to the practice of Dr. Otis, of using very large sounds, and of cutting all strictures, of whatever caliber. While admitting the advantages of large instruments, especially in lithotrity, he asserts that overdistention of the urethra is a dangerous practice, and he also opposes the doctrine that complete division cures stricture. He has seen too many strictures return after such division, even where Syme's operation had been performed, which of course must be much more thorough than any operation within the urethra. These objections, as is well known, have all found abundant expression here. The principles which should govern us in the operation of internal urethrotomy are given as follows, and, as it is difficult to abbreviate them, we quote nearly the speaker's own words: 1. The necessity for physical examination before operating, to detect and estimate the narrowest portion of the urethra. For this purpose he prefers the metal bulbs on slender stems. 2. The necessity for accomplishing a complete division of all the morbid tissue constituting the stricture by an incision carried through it, no matter what part of the urethra, nor how much of it, is involved in the disease. 3. It is essential after such division to place a full-sized catheter at once, to be left there for some hours, in the bladder, to insure a free outlet for the urine, and prevent all possibility of its extravasation into and through the incisions thus made. 4. The necessity for passing full-sized bougies subsequently, at intervals, to effect free distention of the walls of the urethra, which lie in almost constant apposition, and so to prevent reunion of the divided surfaces by first intention. The instrument which he approves of for this operation corresponds in general to the urethrotome of Civiale. All instruments "consisting of a blade moving in a grooved director" are undesirable, because less capable of being controlled as to the depth and extent of the incision. If the stricture is too narrow to admit the bulb of the instrument, it can easily be "brought temporarily to the size required" by leaving a gum-elastic catheter in the urethra for some time. The writer's experience of the operation, even when thoroughly performed, is, that after three or four years recontraction begins, which gradually increases till another operation becomes necessary, which, under these circumstances, he does not hesitate to perform. He believes the operation admissible in all cases where dilatation fails to afford adequate relief. [We are somewhat surprised that no distinction is made in this connection between strictures in different parts of the urethra.] ═══ In the discussion which ensued, Professor MacLeod, of Glasgow, said that he employed all the methods—dilatation, slow or rapid; rupture, or divulsion; urethrotomy, internal or external—but each had its appropriate place. Traumatic strictures were not suited to divulsion, because here the mucous membrane was the seat of lesion. In inflammatory strictures, on the other hand, there was usually, he claimed, a deposit of lymph outside the mucous membrane, the latter being simply wrinkled or corrugated, and pressed down by the external infiltration. Divulsion would rupture the bands of lymph and stretch the mucous membrane. He divided strictures, so far as operations were concerned, as follows: 1. Recent strictures—rupture with Holt's instrument. 2. Old strictures of limited extent—internal incision, followed by Holt's divulsor, or by interrupted dilatation with bougies. For incision he used Trélat's instrument. 3. Old, hard, extensive strictures—external division. 4. Recurrent strictures—internal or external division. 5. Traumatic strictures—urethrotomy followed by dilatation. Strictures near the meatus or in the spongy portion were treated by rupture or incision; behind the bulb, "on their merits," but best by external division. ═══ Mr. Furneaux Jordan, of Birmingham, spoke of the advantages of introducing simple flexible threads, where other instruments could not be passed. The urine passing by the side of the thread appeared to exert considerable hydrostatic pressure. He thought the same principle might be applied to other forms of stricture; for example, of the œsophagus or of the rectum. He did not agree with Sir Henry Thompson as to the necessity of complete division of the stricture; but thought it only necessary to incise sufficiently to pass large bougies. ═══ Mr. Teevan argued against divulsion; his objection to it being, that it was not the firm, unyielding tissue constituting the stricture which was divulsed, but the comparatively healthy mucous membrane; and, moreover, the rent was not in the axis of the urethra, but transverse, as shown at post-mortems in this city and in Paris. The ultimate result, therefore, was an aggravation of the difficulty. ==== In the correspondence of the "Lancet" for September 25th, the operation of divulsion finds defenders in Mr. Holt, Mr. Christopher Heath, Mr. Rawdon MacNamara, Surgeon to the Meath and the Westmoreland Hospitals, and Mr. James R. Lane. Heath gives the following statistics of urethral operations performed in University College Hospital:

Treated by dilatation	157 cases	....	18 deaths.
" " internal urethrotomy	130 "	....	7 "
" " external "	18 "	....	4 "
" " Holt's method	32 "	....	4 "
" " other dilators	8 "	....	2 "

Under "internal urethrotomy," he states, many cases of simple division of the meatus were included. Nearly all of the operations by Holt's method were performed by him. Two of the deaths were due to false passages, and two to pyæmia.

36. Sir Henry Thompson read a paper on *rapid lithotrity* before the British Medical Association, reporting forty-six consecutive cases that had been observed in the course of the previous eighteen months. He gives the following practical deductions: 1. It is important to ascertain the size of the stone carefully before operating, and, if practicable, as it mostly is, its nature, so that the means employed to remove it may correspond; for, when the stone is small, it is unnecessary and dangerous to use large, unwieldy, instruments. 2. It is a more difficult operation to remove a large stone at one sitting than at several, and requires a more practiced hand. 3. We are not justified in attempting to remove all stones by crushing, and certainly not by any one system of crushing. The new method has rendered lithotrity safer than before for the stones already assigned to that process, and has extended it to some which were larger than were so operated on before. The writer still regards lateral lithotomy (sometimes by preference the high operation) as an admirable procedure, not only for hard stones of about two ounces weight and upward, but also for smaller ones in some cases where the urethra is not large, or where other circumstances seem to indicate it. Further, he could not doubt that "many men, whose experience was necessarily small, would cut for a hard stone, weighing an ounce, more safely than they would crush it at a single sitting." He strongly urges independent judgment in every case. [It is noticeable that Thompson does not adopt the term "litholapaxy."]

◆

Miscellany.

Hansen on Pernicious Progressive Anæmia.—Dr. Eiler Hansen, of Copenhagen, records ("Nord. med. Ark.," xii, 1, 1880) a case of pernicious progressive anæmia successfully treated, and makes some critical remarks upon the disease. The patient, a laborer, aged sixty-two, was treated from April 15, 1878, to May 6, 1879. Several months before his admission he had had some abnormal sensations and pains in the lower extremities, accompanied by loss of power. There were no gastric troubles. He consumed a large quantity of alcohol, and had often been exposed to sudden changes of temperature. He was well nourished, but pale. The ophthalmoscope showed a single white spot, of irregular form, in the left retina. Enumeration of the red blood-globules on May 6th showed 1,100,000 in a cubic millimetre, the number of white corpuscles being relatively normal. The anæmic appearance of the patient increased steadily; capillary hæmorrhages appeared in the retina and elsewhere; the number of red blood-globules diminished to 500,000 in a cubic millimetre. During the summer his condition grew worse, gastric troubles supervened, and the retinal hæmorrhages recurred again and again. About the end of September he began to improve, and the number of red blood-globules increased to 1,600,000 in a cubic millimetre. On November 6th a fresh hæmorrhage appeared in the left retina. During the whole course of the disease he had fever on but a single day. He was discharged cured of all the symptoms, except the nervous ones, which persisted.

Hansen on the Bacillus of Leprosy.—Dr. G. Armauer Hansen, of Bergen ("Nord. med. Ark.," xii, 1, 1880), communicates a portion of the observations made by him in 1873, when he discovered for the first time in leprous tubercles vibratile stalks which he considered to be bacteria. His researches led him to regard leprosy as contagious, and induced him to search for the infecting matter. He discovered that the bacteria-like stalks existed in the cells of the tumors, and that when the microscopic preparations, some made without water and some with water, were preserved for several days in a moist chamber, masses of zooglœa were constantly formed, under conditions which seemed to render any accidental mingling of the preparations with the sporules impossible. By Kock's method of tinting with methylic violet, in sections of tubercles hardened in absolute alcohol, he has succeeded in demonstrating the presence of small bacilli in leprous tubercles, and in satisfying himself that the "brown elements" contained in old leprous products are really collections of bacilli or masses of zooglœa contained in cells. It only remains to prove by inoculation that leprous tubercles may be transplanted or propagated to other bodies, to do away with every doubt as to the much disputed etiology of this disease.

Bokkenheuser on Salicylic Acid in Acute Articular Rheumatism.—Dr. Bokkenheuser, of Copenhagen ("Nord. med. Ark.," xii, 1, 1880), concludes, from a careful observation of eighty-one cases of acute articular rheumatism, treated with salicylic acid, that by this method the number of acute cardiac affections occurring in the course of the disease may be markedly diminished, and that it is especially useful in preventing an attack of pleurisy. He found also that salicylic acid was very useful in suppressing articular affections due to exacerbations of a chronic articular rheumatism. On the contrary, he found the drug of no avail in simple non-rheumatic arthritis, or in attacks affecting a single joint.

The International Medical Congress of 1881.—We condense the circular of the Executive Committee, dated London, September, 1880, as follows: The work of the Congress will be carried on in fifteen sections. The days of the meeting will extend from Wednesday, the 3d, to Tuesday, the 9th of August, both days included. A reception of welcome will take place on the evening of August 2d. The meetings will be chiefly held in the Halls of the University of London, and in Burlington House, where, in a most liberal manner, the use of rooms for the general and sectional meetings has been granted to the Congress by the authorities of the University of London, the Royal Society, the Society of Antiquaries, the Astronomical Society, the Linnean Society, the Chemical Society, and the Geological Society. There will be a museum open during the meeting, to which contributions of professional interest will be made. Evening receptions will be held, and excursions arranged to various places of interest. The attendance of our countrymen from all parts of the United Kingdom, India and the Colonies will probably be large, and various circumstances make it probable that a large number of distinguished men from many countries will be attracted to England as our guests on the occasion of the Seventh Session of the Congress, and it is our desire to receive them with all cordiality and honor. It is convenient to inform our colleagues abroad that ladies will be invited to the social and ceremonial meetings of the Congress, but will not be admitted to its business meetings. It will be necessary for all who wish to make communications to the Congress to intimate their intentions to the secretaries of the several sections, and to furnish an abstract of their papers before the 30th of April, when the committee hope to complete the arrangements for the meeting and to issue a programme of the business. All communications respecting the Congress should be addressed to William Mac Cormac, Esq., Hon. Secretary-General, 13 Harley Street, London, W.

Executive Committee.—Dr. Risdon Bennett, LL. D., F. R. S., Pres. Roy. Coll. Phys., London, *Chairman.* W. Bowman, Esq., F. R. S., Dr. Alfred Carpenter, Dr. Andrew Clark, Dr. Matthews Duncan, LL. D., F. R. S. E., J. E. Erichsen, Esq., Pres. Roy. College Surg., England, F. R. S., Sir William Gull, Bart., M. D., D. C. L., F. R. S., Prescott Hewett, Esq., F. R. S., Luther Holden, Esq., Jonathan Hutchinson, Esq., Sir W. Jenner, Bart., K. C. B., M. D., D. C. L., F. R. S., Professor Lister, D. C. L., LL. D., F. R. S., W. Mac Cormac, Esq., A. O. Mackellar, Esq., Sir James Paget, Bart., LL. D., D. C. L., F. R. S., Dr. Pitman, George Pollock, Esq., Dr. Shepherd, Dr. Sieveking, Dr. Pye-Smith, Sir Henry Thompson, Dr. Hermann Weber.

Reception Committee.—Prescott Hewett, Esq., F. R. S., *Chairman.* Professor John Marshall, F. R. S., *Vice-Chairman.* Dr. Chepmell, Dr. Andrew Clark, Dr. Farquharson, M. P., J. Cooper Forster, Esq., Dr. Philip Frank, Dr. Grigg, Ernest Hart, Esq., Mitchell Henry, Esq., F. R. C. S., M. P., Dr. George Johnson, F. R. S., Sir Trevor Lawrence, Bart., M. R. C. S., M. P., Dr. Lyons, M. P., Dr. Monro, Dr. W. O. Priestley, Dr. Owen Rees, F. R. S., Sir Henry Thompson, Dr. A. Vintras, Dr. Sharkey, *Secretary*, Dr. Samuel West, *Secretary.*

The list of officers includes Sir James Paget as President, with a long and illustrious array of Vice-Presidents. The officers of the sections are as follows: Anatomy. *President*, Professor Flower, LL. D., F. R. S. *Vice-Presidents*, Professor Macalister, M. D., Dublin, Professor Rolleston, M. D., F. R. S., Oxford, Professor Turner, F. R. S., Edinburgh. *Secretaries*, Professor Curnow, M. D., Professor Thane. Physiology. *President*, Dr. Michael Foster, F. R. S., Cambridge. *Vice-Presidents*, Dr. Pavy, F. R. S., Professor Purser, M. D., Dublin, Professor Rutherford, M. D., F. R. S., Edinburgh. *Secretaries*, Dr. C. S. Roy, Professor Gerald F. Yeo, M. D. Pathology and Morbid Anatomy. *President*, Dr. Samuel Wilks, F. R. S. *Vice-Presidents*, Dr. Bristowe, Jonathan Hutchinson, Esq., Professor Sanders, M. D., F. R. S. E., Edinburgh. *Secretaries*, Dr. Payne, Marcus Beck, Esq., M. S. Medicine. *President*, Sir William Gull, Bart., M. D., D. C. L., F. R. S. *Vice-Presidents*, Professor Gairdner, M. D., Glasgow, Dr. Quain, F. R. S., Dr. William Roberts, F. R. S., Manchester. *Secretaries*, Dr. Dyce Duckworth, Dr. W. M. Ord. Surgery. *President*, John Eric Erichsen, Esq., P. R. C. S.,

F. R. S. *Vice-Presidents*, Professor E. H. Bennett, M. D., Dublin, Professor Humphry, M. D., F. R. S., Cambridge, W. S. Savory, Esq., F. R. S. *Secretaries*, H. G. Howse, Esq., M. S., Thomas Smith, Esq. Obstetric Medicine and Surgery. *President*, Dr. McClintock, LL. D., Dublin. *Vice-Presidents*, Dr. Barnes, Dr. Matthews Duncan, LL. D., F. R. S. E., Dr. Braxton Hicks, F. R. S., Dr. Priestley. *Secretaries*, Dr. Galabin, Dr. John Williams. Diseases of Children. *President*, Dr. West. *Vice-Presidents*, Dr. Gee, Timothy Holmes, Esq. *Secretaries*, Dr. Donkin, R. W. Parker, Esq. Mental Diseases. *President*, Dr. Lockhart Robertson. *Vice-Presidents*, Dr. Crichton Browne, LL. D., F. R. S. E., Dr. Maudsley. *Secretaries*, Dr. Gasquet, Dr. Savage. Ophthalmology. *President*, William Bowman, Esq., F. R. S. *Vice-Presidents*, G. Critchett, Esq., Henry Power, Esq., M. B., Dr. Argyll Robertson, F. R. S. E., Edinburgh. *Secretaries*, Dr. W. A. Brailey, E. Nettleship, Esq. Diseases of the Ear. *President*, William B. Dalby, Esq. *Vice-Presidents*, Dr. Cassels, Glasgow, Dr. Fitzgerald, Dublin. *Secretaries*, Dr. Urban Pritchard, Dr. Laidlaw Purves. Diseases of the Skin. *President*, Erasmus Wilson, Esq., F. R. S. *Vice-Presidents*, Dr. Cheadle, Dr. R. Liveing. *Secretaries*, Dr. Cavafy, Dr. Thin. Diseases of the Teeth. *President*, Edwin Saunders, Esq. *Vice-Presidents*, John Tomes, Esq., F. R. S., Charles Spence Bate, Esq., F. R. S. *Secretary*, C. Tomes, Esq., F. R. S. State Medicine. *President*, John Simon, Esq., C. B., D. C. L., F. R. S. *Vice-Presidents*, Dr. George Buchanan, Dr. Douglas Maclagan, F. R. S. E., Edinburgh, Professor de Chaumont, F. R. S., Surgeon-Major, J. Netten Radcliffe, Esq., Dr. Norman Chevers, Dep. Surg.-Gen. *Secretaries*, Professor Corfield, M. D., Dr. Thorne Thorne. Military Surgery and Medicine. *President*, Surgeon-General Professor Longmore, C. B. *Vice-Presidents*, Sir William Muir, M. D., K. C. B., Director-General Army Med. Dep., Surgeon-General Sir Joseph Fayrer, K. C. S. I., M. D., LL. D., F. R. S., India office, Dr. J. W. Reid, Director-General Med. Dep. of Navy. *Secretaries*, Surgeon A. B. R. Myers, Coldstream Guards, Surgeon-Major Sandford Moore, Aldershot, Dr. W. H. Lloyd, Fleet Surgeon, R. N. Materia Medica and Pharmacology. *President*, Professor T. R. Fraser, M. D., F. R. S., Edinburgh. *Vice-Presidents*, Dr. Lauder Brunton, F. R. S., Professor Sydney Ringer, M. D. *Secretaries*, Professor E. B. Baxter, B. A., M. D., Professor F. T. Roberts, B. Sc., M. D. Museum. *Committee*, Jonathan Hutchinson, Esq., *Chairman*, Alban Doran, Esq., F. J. Gant, Esq., Dr. J. F. Goodhart, Dr. F. Macnamara, Dr. Vivian Poore, C. Stewart, Esq., Waren Tay, Esq.

Army Intelligence.—*Official List of Changes of Stations and Duties of Officers of the Medical Department of the United States Army from October 14, 1880, to November 13, 1880.*—King, William S., Colonel and Surgeon. His leave of absence still further extended six months on account of sickness. S. O. 240, A. G. O., November 9, 1880. ===== Baily, E. I., Lieutenant-Colonel and Surgeon. When relieved by Surgeon Moore, to proceed to Wilmington, Del., and report, by letter, his arrival to the Surgeon General. S. O. 232, A. G. O., October 28, 1880. ===== Moore, John, Major and Surgeon. Relieved from duty with Army Medical Examining Board in New York City, and to report in person to Commanding General, Department of the Columbia, for duty as Medical Director of that Department. S. O. 232, A. G. O., October 28, 1880. ===== White, C. B., Major and Surgeon. To report in person at the expiration of his present leave of absence to the Adjutant General of the Army, for special duty in connection with the recruiting service. S. O. 229, A. G. O., October 25, 1880. ===== Meacham, F., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 234, A. G. O., October 30, 1880.

===== Caldwell, D. G., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Fred. Steele, W. T. S. O. 98, Department of the Platte, October 20, 1880. ===== Patzki, J. H., Captain and Assistant Surgeon. Assigned to duty at Jackson Barracks, La. S. O. 126, Department of the South, October 29, 1880. ===== Heizmann, Charles L., Captain and Assistant Surgeon. The extension of his leave of absence of September 28, 1880, from Headquarters, Division Pacific and Department California, is further extended two months. S. O. 234, C. S., A. G. O. ===== Lauderdale, J. V., Captain and Assistant Surgeon. Assigned to duty at McPherson Barracks, Ga. S. O. 127, Department of the South, November 1, 1880. ===== Matthews, W. C., Captain and Assistant Surgeon. His assignment to duty at cantonment on Uncompahgre River, Col., revoked; and he is assigned to duty at Fort Wingate, New Mexico. S. O. 229, Department of the Missouri, October 16, 1880. ===== Worthington, J. C., Captain and Assistant Surgeon. Granted leave of absence for six months. S. O. 241, A. G. O., November 10, 1880. ===== Torney, G. H., Captain and Assistant Surgeon. When relieved by Assistant Surgeon Matthews, to proceed to Fort Lyon, Col., and report to the Post Commander for duty. S. O. 229, C. S., Department of the Missouri. ===== Wood, M. W., Captain and Assistant Surgeon. Assigned to duty at Fort Brady, Mich. S. O. 201, Department of the East, November 12, 1880. ===== Shannon, W. C., Captain and Assistant Surgeon. Granted leave of absence for six months. S. O. 220, A. G. O., October 14, 1880. ===== Cunningham, Thomas A., First Lieutenant and Assistant Surgeon. Granted leave of absence for six months, with permission to go beyond sea. S. O. 227, A. G. O., October 22, 1880. ===== Burton, H. G., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for one month's extension. S. O. 230, A. G. O., October 26, 1880. ===== Gibson, R. J., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Leavenworth, and assigned to duty at the cantonment on Uncompahgre River, Col. S. O. 229, C. S., Department of the Missouri. ===== Satterlee, Richard S., Lieutenant-Colonel and Brevet Brigadier-General, Chief Medical Purveyor, United States Army—retired. Died at New York City, November 10, 1880.